

United States Department of the Interior
U.S. Fish and Wildlife Service
National Wildlife Refuge System
General Special Use
Application and Permit

OMB Control Number 1018-0102
Expiration Date: 06/30/2014

Name of Refuge _____

Address _____

Attn: (Refuge Official) _____

Phone # _____ E-mail _____

Application

(To be filled out by applicant. Note: Not all information is required for each use. See instructions at the end of the notice.)

1) New Renewal Modification Other _____

Applicant Information

2) Full Name: _____ 6) Phone #: _____

3) Organization: _____ 7) Fax #: _____

4) Address: _____ 8) E-mail: _____

5) City/State/Zip: _____

9) Assistants/Subcontractors/Subpermittees: (List full names, addresses and phone #'s and specifically describe services provided if subcontractors are used.)

Activity Information

10) Activity type: Event Wood Cutting Group Visit Cabin/Subsistence Cabin Educational Activity
 Other _____

11) Describe Activity: (Specifically identify timing, frequency, and how the event is expected to proceed.)

12) Activity/site occupancy timeline: (Specifically identify beginning and ending dates, site occupation timeline, hours, clean-up and other major events.)

(Depending on the activity for which you are requesting a permit, we may ask you for the following activity information.
Please contact the specific refuge where the activity is being conducted to determine what activity information is required.)

13) Expected number of participants:

Children _____ Adults _____ Total _____

14) Grade level of educational group:

Grade _____ N/A

15) Will staff time/assistance be required?

Yes No N/A

16a) Plan of Operation required? Yes No N/A

16b) Plan of Operation attached? Yes No

17) Location: (Specifically identify location; GPS location preferred.)

18a) Is map of location(s) required?

Yes No N/A

18b) Is map of location(s) attached?

Yes No

Insurance Coverage/Certifications/Permits

19a) Is insurance required?

Yes No N/A

19b) Insurance: (Provided carrier, type and policy number)

20) Other licenses/certifications/permits required: (Specifically identify licenses, certifications, and permits.)

Logistics and Transportation

21) Does activity require personnel to stay overnight onsite? Yes No

22) Personnel involved:

23) Specifically describe all equipment/gear and materials used:

24) Transportation description(s) and license number(s) to access refuge(s): [Provide description of and specific auto license/boat/plane registration number(s).]

25) Specifically describe onsite work and/or living accommodations:

26) Specifically describe onsite hazardous material storage or other onsite material storage space:

27) Signature of Applicant _____ Date of Application: _____

**Sign, date, and print this form and return it to the refuge for processing.
Do not fill out information below this page.**

PRINT FORM

For Official Use Only (This section to be filled out by refuge personnel only.)

Special Use Permit

Permit #: _____

1) Date: _____ 2) Permit Approved Permit Denied 3) Station #: _____

4) Additional special conditions required: (Special conditions may include activity reports, before and after photographs, and other conditions.)

Yes No N/A

Additional sheets attached:

Yes No

5) Other licenses/permits required:

Yes No N/A

Verification of other licenses/permits, type:

6) Insurance/certifications required:

Yes No N/A

Verification of insurance/certification, type:

7) Record of Payments: Exempt Partial Full

Amount of payment: _____ Record of partial payment: _____

8) Bond posted: Yes No

This permit is issued by the U.S. Fish and Wildlife Service and accepted by the applicant signed below, subject to the terms, covenants, obligations, and reservations, expressed or implied herein, and to the notice, conditions, and requirements included or attached. A copy of this permit should be kept on hand so that it may be shown at any time to any refuge staff.

Permit approved and issued by (Signature and title):

_____ Date: _____

Permit accepted by (Signature of applicant):

_____ Date: _____

Notice

In accordance with the Privacy Act (5 U.S. C. 552a) and the Paperwork Reduction Act (44 U.S. C. 3501), please note the following information:

1. The issuance of a permit and collection of fees on lands of the National Wildlife Refuge System are authorized by the National Wildlife Refuge System Administration Act (16 U.S. C. 668dd-ee) as amended, and the Refuge Recreation Act (16 U.S. C. 460k-460k-4).
2. The information that you provide is voluntary; however submission of requested information is required to evaluate the qualifications, determine eligibility, and document permit applicants under the above Acts. It is our policy not to use your name for any other purpose. The information is maintained in accordance with the Privacy Act. All information you provide will be considered in reviewing this application. False, fictitious, or fraudulent statements or representations made in the application may be grounds for revocation of the Special Use Permit and may be punishable by fine or imprisonment (18 U.S.C. 1001). Failure to provide all required information is sufficient cause for the U.S. Fish and Wildlife Service to deny a permit.
3. No Members of Congress or Resident Commissioner shall participate in any part of this contract or to any benefit that may arise from it, but this provision shall not pertain to this contract if made with a corporation for its general benefit.
4. The Permittee agrees to be bound by the equal opportunity "nondiscrimination in employment" clause of Executive Order 11246.
5. Routine use disclosures may also be made: (a) to the U.S. Department of Justice when related to litigation or anticipated litigation; (b) of information indicating a violation or potential violation of a statute, rule, order, or license to appropriate Federal, State, local or foreign agencies responsible for investigating or prosecuting the violation or for enforcing or implementing the statute, rule, regulations, order, or license; (c) from the record of the individual in response to an inquiry from a Congressional office made at the request of the individual (42 FR 19083; April 11, 1977); and (d) to provide addresses obtained from the Internal Revenue Service to debt collection agencies for purposes of locating a debtor to collect or compromise a Federal Claim against the debtor, or to consumer reporting agencies to prepare a commercial credit report for use by the Department (48 FR 54716; December 6, 1983).
6. An agency may not conduct or sponsor and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. This information collection has been approved by OMB and assigned control number 1018-0102. The public reporting burden for this information collection varies based on the specific refuge use being requested. The relevant public reporting burden for the General Use Special Use Permit Application form is estimated to average 30 minutes per response, including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Comments on this form should be mailed to the Information Collection Clearance Officer, U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, MS 2042-PDM, Arlington, Virginia, 22203.

General Conditions and Requirements

1. Responsibility of Permittee: The permittee, by operating on the premises, shall be considered to have accepted these premises with all facilities, fixtures, or improvements in their existing condition as of the date of this permit. At the end of the period specified or upon earlier termination, the permittee shall give up the premises in as good order and condition as when received except for reasonable wear, tear, or damage occurring without fault or negligence. The permittee will fully repay the Service for any and all damage directly or indirectly resulting from negligence or failure on his/her part, and/or the part of anyone of his/her associates, to use reasonable care.
2. Operating Rules and Laws: The permittee shall keep the premises in a neat and orderly condition at all times, and shall comply with all municipal, county, and State laws applicable to the operations under the permit as well as all Federal laws, rules, and regulations governing national wildlife refuges and the area described in this permit. The permittee shall comply with all instructions applicable to this permit issued by the refuge official in charge. The permittee shall take all reasonable precautions to prevent the escape of fires and to suppress fires and shall render all reasonable assistance in the suppression of refuge fires.
3. Use Limitations: The permittee's use of the described premises is limited to the purposes herein specified and does not, unless provided for in this permit, allow him/her to restrict other authorized entry onto his/her area; and permits the Service to carry on whatever activities are necessary for: (1) protection and maintenance of the premises and adjacent lands administered by the Service; and (2) the management of wildlife and fish using the premises and other Service lands.
4. Transfer of Privileges: This permit is not transferable, and no privileges herein mentioned may be sublet or made available to any person or interest not mentioned in this permit. No interest hereunder may accrue through lien or be transferred to a third party without the approval of the Regional Director of the Service and the permit shall not be used for speculative purposes.
5. Compliance: The Service's failure to require strict compliance with any of this permit's terms, conditions, and requirements shall not constitute a waiver or be considered as a giving up of the Service's right to thereafter enforce any of the permit's terms or conditions.
6. Conditions of Permit not Fulfilled: If the permittee fails to fulfill any of the conditions and requirements set forth herein, all money paid under this permit shall be retained by the Government to be used to satisfy as much of the permittee's obligation as possible.
7. Payments: All payment shall be made on or before the due date to the local representative of the Service by a postal money order or check made payable to the U.S. Fish and Wildlife Service.
8. Termination Policy: At the termination of this permit the permittee shall immediately give up possession to the Service representative, reserving, however, the rights specified in paragraph 11. If he/she fails to do so, he/she will pay the government, as liquidated damages, an amount double the rate specified in this permit for the entire time possession is withheld. Upon yielding possession, the permittee will still be allowed to reenter as needed to remove his/her property as stated in paragraph 11. The acceptance of any fee for the liquidated damages or any other act of administration relating to the continued tenancy is not to be considered as an affirmation of the permittee's action nor shall it operate as a waiver of the Government's right to terminate or cancel the permit for the breach of any specified condition or requirement.
9. Revocation Policy: This permit may be revoked by the Regional Director of the Service without notice for noncompliance with the terms hereof or for violation of general and/or specific laws or regulations governing national wildlife refuges or for nonuse. It is at all times subject to discretionary revocation by the Director of the Service. Upon such revocation the Service, by and through any authorized representative, may take possession of the said premises for its own and sole use, and/or may enter and possess the premises as the agent of the permittee and for his/her account.

10. Damages: The United States shall not be responsible for any loss or damage to property including, but not limited to, growing crops, animals, and machinery or injury to the permittee or his/her relatives, or to the officers, agents, employees, or any other who are on the premises from instructions or by the suffrance of wildlife or employees or representatives of the Government carrying out their official responsibilities. The permittee agrees to save the United States or any of its agencies harmless from any and all claims for damages or losses that may arise to be incident to the flooding of the premises resulting from any associated Government river and harbor, flood control, reclamation, or Tennessee Valley Authority activity.

11. Removal of Permittee's Property: Upon the expiration or termination of this permit, if all rental charges and/or damage claims due to the Government have been paid, the permittee may, within a reasonable period as stated in the permit or as determined by the refuge official in charge, but not to exceed 60 days, remove all structures, machinery, and/or equipment, etc. from the premises for which he/she is responsible. Within this period the permittee must also remove any other of his/her property including his/her acknowledged share of products or crops grown, cut, harvested, stored, or stacked on the premises. Upon failure to remove any of the above items within the aforesaid period, they shall become the property of the United States.

Instructions for Completing Application

You may complete the application portion verbally, in person or electronically and submit to the refuge for review. Note: Please read instructions carefully as not all information is required for each activity. Contact the specific refuge headquarters office where the activity is going to be conducted if you have questions regarding the applicability of a particular item.

1. Identify if permit application is for new, renewal or modification of an existing permit. Permit renewals may not need all information requested. Contact the specific refuge headquarters office where the activity is going to be conducted if you have questions regarding the applicability of a particular item.

2-8. Provide full name, organization (if applicable), address, phone, fax, and e-mail.

9. Provide names and addresses of assistants, subcontractors or subpermittees. Names and address are only required if the assistants, subcontractors or subpermittees will be operating on the refuge without the permittee being present. Volunteers, assistants, subcontractors or subpermittees that are accompanied by the permittee need not be identified.

10. Activity type: check one of the following categories:

- a. Event;
- b. Wood cutting;
- c. Group visit;
- d. Cabin/Subsistence cabin;
- e. Educational activity; or
- f. Other—any other activity(s) not mentioned above. Please describe "other" activity.

11. Describe Activity: provide detailed information on the activity, including times, frequency and how the activity is expected to proceed, etc. Permit renewals may not need activity description, if the activity is unchanged from previous permit. Most repetitive activities, such as group visits, do not require an activity description for each visit. Contact the specific refuge headquarters office where the activity is going to be conducted to determine if an activity description is required.

12. Activity/site occupancy timeline: identify beginning and ending dates, site occupation timeline, hours, clean-up and other major events. Permit renewals may not need an activity/site occupancy timeline, if the activity is unchanged from previous permit. Most repetitive activities, such as group visits, do not require an activity/site occupancy timeline for each visit. Contact the specific refuge headquarters office where the activity is going to be conducted to determine if an activity/site occupancy timeline is required.

13-14 Expected number of participants: Provide an estimate of the number of adults, and children and grade level of group, if applicable.

15. Identify if onsite refuge staff will be required for group activities and anticipated time frame, if applicable.

16a-16b. Identify and attach Plan of Operation, if required. Most repetitive activities, such as group visits, do not require Plans of Operations for each visit. In addition, permit renewals may not require Plans of Operations if the activity is essentially unchanged from the previous permit. Contact the specific refuge headquarters office where the activity is going to be conducted to determine if a Plan of Operations is required.

17. Location: identify specific location (GPS coordinates preferred), if not a named facility. Most repetitive activities, such as group visits, do not require a location. In addition, permit renewals may not require a location if the activity is essentially unchanged from the previous permit. Contact the specific refuge headquarters office where the activity is going to be conducted to determine if a location is required.

18a-18b. Attach a map of location, if required and not conducted at a named facility. Most repetitive activities, such as group visits, do not require a map. In addition, permit renewals may not require a map if the activity is essentially unchanged from the previous permit. Contact the specific refuge headquarters office where the activity is going to be conducted to determine if a map is required.

19a-19b. Provide name, type and carrier of insurance, if required. Contact the specific refuge headquarters office where the activity is going to be conducted to determine if insurance and type of insurance are required.

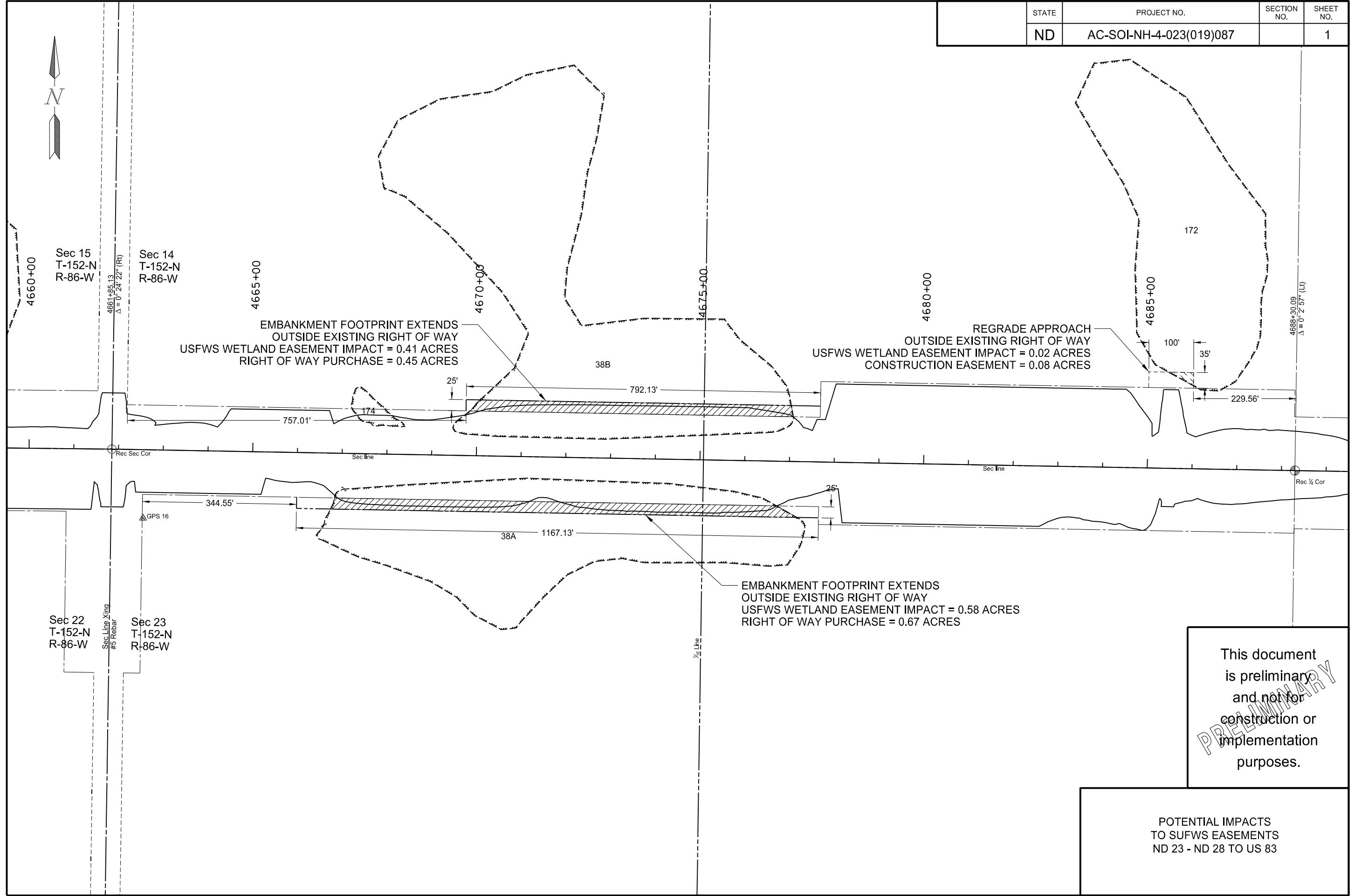
20. Specifically identify types and numbers of other licenses, certifications or permits, if required. Contact the specific refuge headquarters office where the activity is going to be conducted to determine the types of licenses, certifications or permits required, and to coordinate the simultaneous application of several types of licenses, certifications or permits. This Special Use Permit (SUP) may be processed while other certifications are being obtained.

21-22. Provide name(s) of any personnel required to stay overnight, if applicable.

23. Identify all equipment and materials, which will be used, if required. Most repetitive events, such as group visits, do not require a list of equipment. In addition, permit renewals may not require a list of equipment if the event is essentially unchanged from the previous permit. Contact the specific refuge headquarters office where the activity is going to be conducted to determine if a list of equipment is required.
24. Describe and provide vehicle descriptions and license plate or identification numbers of all vehicles, including boats and airplanes, if required. Motor vehicle descriptions are only required for permittee vehicle, and/or if the vehicle will be operated on the refuge without the permittee being present. Motor vehicles that are accompanied by the permittee as part of a group (convoy) activity need not be identified if cleared in advance by refuge supervisor. Specifically describe ship-to-shore, intersite (between islands, camps, or other sites) and onsite transportation mechanisms, and license plate or identification numbers, if required.
25. Specifically describe onsite work and/or living accommodations, if applicable.
26. Specifically describe onsite hazardous material storage, or other onsite material storage space (including on and offsite fuel caches).
27. Sign, date, and print the application. Click on the Print button to print the application (if using the fillable version). The refuge official will review and, if approved, fill out the remaining information, sign, and return a copy to you for signature and acceptance.

The form is not valid as a permit unless it includes refuge approval, a station number, a refuge-assigned permit number, and is signed by a refuge official.

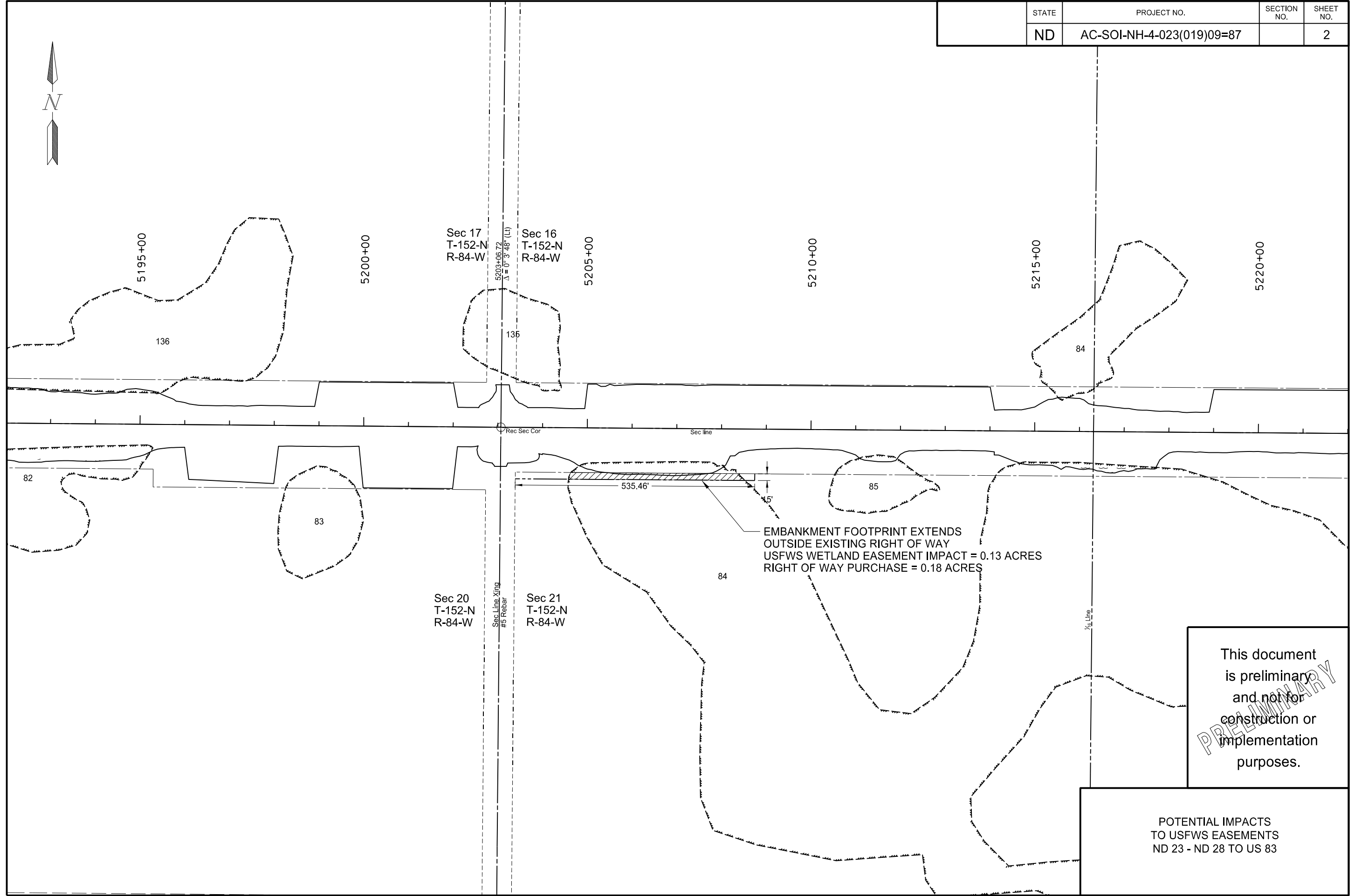
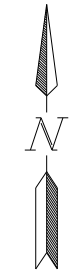
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087		1



This document is preliminary and not for construction or implementation purposes.

POTENTIAL IMPACTS TO SUFWS EASEMENTS ND 23 - ND 28 TO US 83

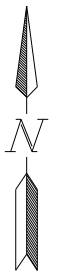
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)09=87		2



This document is preliminary and not for construction or implementation purposes.

POTENTIAL IMPACTS TO USFWS EASEMENTS ND 23 - ND 28 TO US 83

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087		3



5320+00

5325+00

5330+00

5335+00

5340+00

5345+00

EMBANKMENT FOOTPRINT EXTENTS
OUTSIDE EXISTING RIGHT OF WAY
USFWS WETLAND EASEMENT IMPACT = 0.16 ACRES
RIGHT OF WAY PURCHASE = 0.17 ACRES

95
379.94'

20'

GPS 11

97B

99

127

126

Sec line

Rec 1/2 Cor

Sec line

R Mkr 101

95

96

98

94

97A

1/2 Line

1/2 Line, Xing
Rebar

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is preliminary
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construction or
implementation
purposes.

POTENTIAL IMPACTS
TO USFWS EASEMENTS
ND 23 - ND 28 TO US 83

IV. Environmental Impacts

A. Land Use

The proposed project requires additional right of way in order to comply with NDDOT standards after widening of the roadway. Primary land uses that will be impacted are pasture and good tillable agricultural land.

B. Prime and Unique Farmlands

Natural Resources Conservation Service (NRCS) indicated that no prime or important farmland soils are involved with the project. Correspondence with NRCS is included in Appendix J.

C. Social

Temporary impacts on the motoring public will arise due to time delays during construction. To reduce impacts during construction, two way traffic will be maintained throughout the project at reduced speeds whenever possible.

With many local roads in the project area under water, ND Highway 23 is an important east west corridor for the cities of Makoti and Ryder to access medical facilities in New Town or Minot. ND Highway 23 to US Highway 83 is the typical route used to transport patients from the clinic in New Town to Minot. An alternate route to Minot would be to take ND Highway 8 to US Highway 2. This alternate route would result in an additional 10 miles of travel to reach Minot.

D. Economics

Rehabilitation of ND Highway 23 will have positive impacts on area economy. It is an important truck route for oil field development as well as traffic heading west towards New Town, ND.

E. Wetlands

The field wetland delineation for PCN 19206 / AC-SOI-NH-4-023(016)078 and PCN 19376 / AC-SOI-NH-4-023(019)087 was conducted in May and June of 2011 by Mark D. Aanenson of Houston Engineering, Inc. and C.J. Heidt of Prairie Soils Consulting.

The wetland delineations were conducted in accordance with the 1987 Corps of Engineers Wetland Delineation Manual and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region. Wetland boundaries within the study area were determined by completing USACE Wetland Determination Data Forms for paired test hole points and observing vegetation and hydrology in the area. The US Army Corp of Engineers (USACE) jurisdictional determination NWO-2011-2036-BIS dated 11/01/2011 indicated that there are both jurisdictional and non-jurisdictional wetlands within the project limits.

Wetland maps were developed using 2009 National Agricultural Inventory Program aerial photography in combination with the National Wetlands Inventory (NWI) layer.

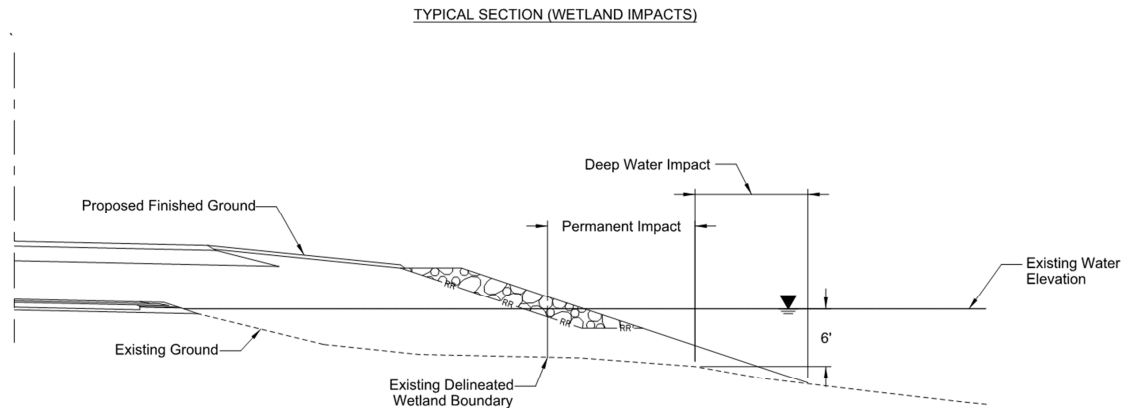
The complete field delineation report is available at the NDDOT central office. Due to the current high water conditions, areas of ROW and highway that are typically uplands are under water.

Wetlands exist on both sides of the highway throughout the project; therefore it is not feasible to avoid impacts by widening the road to one side.

For project AC-SOI-NH-4-023(016)078 a total of approximately 0.64 natural/jurisdictional, 0.63 natural/non-jurisdictional, 0.00 artificial/jurisdictional and 0.05 artificial/non-jurisdictional acres of wetlands will be impacted permanently and 0.58 acres will be impacted temporarily.

For project AC-SOI-NH-4-023(019)087 a total of approximately 0.00 natural / jurisdictional, 21.80 natural / non-jurisdictional, 0.00 artificial / jurisdictional and 0.35 artificial / non-jurisdictional acres of wetlands will be impacted permanently and 4.48 acres will be impacted temporarily including the optional work grade raises. In addition 5.15 acres of deep water (>6 feet) will be impacted, which results in 43,274 cubic yards of fill in deep water. Figure 8 shows a typical section with impacts for the grade raise section.

Figure 8 – Proposed Typical Sections Grade Raise Impacts



The impacted wetland area is to be mitigated by the creation of wetlands within or adjacent to the project area. A preliminary mitigation plan was provided to the Interagency Coordination Meeting January 12, 2012. It was determined that the agencies agree that it does have merit provided that the borrow sites did not affect hydrology and that the wetland complexes are restored. A scope & effect would need to be completed to determine credit value. This would occur during the Design Phase. Please refer to a draft mitigation plan in Appendix K.

Project AC-SOI-NH-4-023(016)078 results in approximately 1.32 acres of permanent impacts and 0.58 acres of temporary impacts to existing wetlands. Approximately 1.27 acres of natural/jurisdictional and natural/non-jurisdictional wetlands will be mitigated on site. The remaining 0.05 acres of artificial/non-jurisdictional wetland impacts do not require mitigation. Temporary impacts will not be mitigated as original grades will be reestablished.

Approximately 22.15 acres of wetlands will be impacted permanently and 4.48 acres of wetlands will be impacted temporarily due to project AC-SOI-NH-4-023(019)087. Deep water impacts are estimated at 5.15 acres. Approximately 21.80 acres of natural/non-jurisdictional wetlands will be mitigated on site. The remaining 0.35 acres of artificial/non-jurisdictional impacts do not require mitigation. Temporary impacts will not be mitigated as original grades will be reestablished. Deep water impacts will not be mitigated.

Measures considered to avoid or minimize impacts to wetlands on the projects include utilizing steeper inslopes, narrower shoulders and widening the road to one side. Using an inslope steeper than 4:1 within the clear zone does not meet the design standards for a principal arterial on a state corridor. In the scoping phase, utilizing six foot shoulders was considered, however this option was not advanced because of the large amount of truck traffic and the need for room to stop safely in an emergency. Wetlands in the project corridor are on both sides of the highway throughout the project, therefore widening to only one side did not reduce the amount of impacts.

The table on the following pages outlines the estimated wetland impacts within the project limits based upon findings generated by the field and office delineations. The impacts shown in the table are based upon breaking inslopes from 4:1 to 3:1 at the clear zone.

Table 16 – Wetland Table (continued)

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	AC-SOI-4-NH-4-023(016)078				AC-SOI-4-NH-4-023(019)087																				
								Alternative B				Alternative B with Option 1				Alternative B with Option 2				Optional Work - Grade Raises (In addition to Alternative B with Option 1 or 2)												
								Impacts to Wetlands		Impacts to Deep Water		Impacts to Wetlands		Impacts to Deep Water		USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands				
								Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.			
24B	T152N R86W Section19	-101.723188574 47.9777761112	PEMC	Basin	0.32	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	T152N R86W Section19	-101.72901122 47.9778271922	PEMC	Basin	0.58	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	T152N R86W Section19	-101.726854023 47.977838312	PEMC	Basin	4.43	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28A	T152N R86W Section20	-101.71583518 47.9772901318	PEMA	Basin	44.57	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28B	T152N R86W Section17	-101.715116877 47.9789171423	PEMA	Basin	14.64	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	T152N R86W Section17	-101.707858945 47.9794350013	PEMC	Basin	11.71	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	T152N R86W Section21	-101.69962928 47.9778256076	PABF	Basin	3.42	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	T152N R86W Section21	-101.693879075 47.9777936206	PEMC	Basin	0.25	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	T152N R86W Section21	-101.687855697 47.9777785901	PEMC	Basin	0.31	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	T152N R86W Section21	-101.684463985 47.9778135261	PEMC	Basin	0.22	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	T152N R86W Section21	-101.680792703 47.9771737992	PEMC	Basin	1.23	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	T152N R86W Section22	-101.669789437 47.9778532894	PEMC	Basin	2.59	Natural	No	-	-	-	0.05	0.03	-	-	-	-	0.05	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	
36	T152N R86W Section22	-101.661364483 47.97772376	PEMA	Basin	0.06	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
37	T152N R86W Section22	-101.660049222 47.9770549627	PABF	Basin	5.01	Natural	No	-	-	-	-	0.02	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	
38A	T152N R86W Section23	-101.653556962 47.9777316276	PABF	Basin	4.87	Natural	No	-	-	-	0.05	0.37	0.12	152	-	0.05	0.05	0.37	0.12	152	-	0.05	-	0.19	0.48	5,726	-	0.53	-	-	-	
38B	T152N R86W Section14	-101.653446537 47.9793090353	PEMC	Basin	7.69	Natural	No	-	-	-	0.05	0.60	0.11	51	-	-	0.05	0.60	0.11	51	-	-	0.01	0.34	0.52	5,432	-	0.41	-	-	-	
39	T152N R86W Section23	-101.641149183 47.9779579942	PEMA	Basin	0.23	Natural	No	-	-	-	0.02	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-		
40A	T152N R86W Section24	-101.634589717 47.9779215705	PABF	Basin	0.68	Natural	No	-	-	-	0.25	0.36	0.08	481	-	-	0.25	0.36	0.08	481	-	-	-	-	-	-	-	-	-	-	-	
40B	T152N R86W Section14	-101.636785443 47.9787034316	PABF	Basin	8.64	Natural	No	-	-	-	0.09	0.48	0.45	4,300	-	-	0.09	0.48	0.45	4,300	-	-	0.01	0.16	0.47	7,127	-	-	-	-	-	
41	T152N R86W Section24	-101.626203308 47.9777918175	PABF	Basin	4.06	Natural	No	-	-	-	0.15	-	-	-	-	-	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-		
42	T152N R86W Section24	-101.615745826 47.9775749559	PEMC	Basin	4.06	Natural	No	-	-	-	0.19	0.11	219	-	-	-	0.19	0.11	219	-	-	-	-	-	-	-	-	-	-	-		
43	T152N R85W Section19	-101.61022248 47.97790699	PEMC	Basin	0.67	Natural	No	-	-	-	0.13	-	-	-	-	-	0.13	-	-	-	-	-	-	-	-	-	-	-	-	-		
44	T152N R85W Section18	-101.606069584 47.9785430465	PEMC	Basin	0.91	Natural	No	-	-	-	0.11	0.21	-	-	-	-	0.11	0.21	-	-	-	-	-	-	-	-	-	-	-	-		
45A	T152N R85W Section19	-101.598077968 47.9777633578	PEM/ABF	Basin	5.62	Natural	No	-	-	-	0.05	0.65	-	-	-	-	0.05	0.65	-	-	-	-	-	0.22	0.10	654	-	-	-	-		

Table 16 – Wetland Table (continued)

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	AC-SOI-4-NH-4-023(016)078				AC-SOI-4-NH-4-023(019)087																	
								Alternative B				Alternative B with Option 1				Alternative B with Option 2				Optional Work - Grade Raises (In addition to Alternative B with Option 1 or 2)									
								Impacts to Wetlands		Impacts to Deep Water		Impacts to Wetlands		Impacts to Deep Water		USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands	
								Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.
45B	T152N R85W Section18	-101.597212075 47.9790646095	PEMC	Basin	8.91	Natural	No	-	-	-	-	0.05	0.84	0.11	201	-	-	0.05	0.84	0.11	201	-	-	-	0.10	0.11	1,888	-	-
46	T152N R85W Section19	-101.595288196 47.9778930384	PEMA	Basin	0.55	Natural	No	-	-	-	-	0.05	-	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-
47	T152N R85W Section20	-101.587102042 47.9779962983	PEMC	Basin	0.64	Natural	No	-	-	-	-	0.11	-	-	-	-	-	0.11	-	-	-	-	-	-	-	-	-	-	-
48A	T152N R85W Section20	-101.583665691 47.9779084738	PEMA	Basin	0.93	Natural	No	-	-	-	-	0.03	0.04	-	-	-	-	0.03	0.04	-	-	-	-	-	-	-	-	-	-
48B	T152N R85W Section17	-101.583390573 47.9788746341	PEMC	Basin	1.35	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	-	-	-	-	-
49A	T152N R85W Section20	-101.579272009 47.9775336741	PABF	Basin	5.52	Natural	No	-	-	-	-	0.07	0.52	0.02	9	-	-	0.07	0.52	0.02	9	-	-	-	0.19	0.10	659	-	-
49B	T152N R85W Section17	-101.579137309 47.9789524082	PABF	Basin	4.73	Natural	No	-	-	-	-	0.05	0.55	0.05	66	-	-	0.05	0.55	0.05	66	-	-	0.01	0.11	0.11	955	-	-
50	T152N R85W Section20	-101.574851053 47.9778143772	PEMC	Basin	1.34	Natural	No	-	-	-	-	0.12	-	-	-	-	-	0.12	-	-	-	-	-	-	-	-	-	-	-
51	T152N R85W Section21	-101.570727327 47.9776752014	PEMC	Basin	1.21	Natural	No	-	-	-	-	0.08	0.02	-	-	-	-	0.08	0.02	-	-	-	-	-	-	-	-	-	-
52	T152N R85W Section21	-101.558838254 47.9775555558	PEM/ABF	Basin	2.65	Natural	No	-	-	-	-	0.05	0.18	-	-	-	-	0.05	0.18	-	-	-	-	-	-	-	-	-	-
53	T152N R85W Section21	-101.554347485 47.977980889	PEMC	Basin	0.47	Natural	No	-	-	-	-	0.02	0.08	-	-	-	-	0.02	0.08	-	-	-	-	-	-	-	-	-	-
54	T152N R85W Section22	-101.54770965 47.9781169598	PEMC	Basin	0.89	Natural	No	-	-	-	-	0.03	0.36	-	-	-	-	0.03	0.36	-	-	-	-	-	-	-	-	-	-
55	T152N R85W Section22	-101.544250895 47.9780129832	PEMC	Basin	0.07	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	T152N R85W Section15	-101.541042652 47.9784584973	PEMCx	Basin	0.10	Natural	No	-	-	-	-	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-
57	T152N R85W Section22	-101.540983303 47.9782796286	PEMA	Basin	0.09	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	T152N R85W Section15	-101.533476589 47.9812596639	PABF	Basin	5.00	Natural	No	-	-	-	-	0.09	0.09	-	-	-	-	0.09	0.09	-	-	-	-	-	-	-	-	-	-
59	T152N R85W Section14	-101.517901757 47.9867840335	L2ABG	Basin	351.27	Natural	No	-	-	-	-	0.30	0.97	-	-	-	-	0.30	0.86	-	-	-	-	-	0.71	-	-	-	-
60	T152N R85W Section14	-101.510734729 47.9809016763	PEMA	Basin	5.84	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	T152N R85W Section14	-101.50899384 47.9800480317	PEMC	Basin	1.01	Natural	No	-	-	-	-	0.01	0.47	-	-	-	-	0.01	0.47	-	-	-	-	-	-	-	-	-	-
62	T152N R85W Section24	-101.499615388 47.9783142569	PEMC	Basin	1.16	Natural	No	-	-	-	-	0.27	-	-	-	-	-	0.27	-	-	-	-	-	-	-	-	-	-	-
63A	T152N R85W Section24	-101.496011094 47.978302321	PEMA	Drainage Ditch	0.33	Artificial	No	-	-	-	-	0.20	0.07	-	-	-	-	0.20	0.07	-	-	-	-	-	-	-	-	-	-
63B	T152N R85W Section13	-101.498447558 47.9791563817	PABF	Basin	9.68	Natural	No	-	-	-	-	0.02	0.37	-	-	-	-	0.02	0.37	-	-	-	-	-	-	-	-	-	-
64	T152N R85W Section24	-101.494281256 47.9783194029	PEMC	Drainage Ditch	0.02	Artificial	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	T152N R85W Section24	-101.493329131 47.9781227576	PEMC	Basin	1.00	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 16 – Wetland Table (continued)

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	AC-SOI-4-NH-4-023(016)078				AC-SOI-4-NH-4-023(019)087																	
								Alternative B				Alternative B with Option 1				Alternative B with Option 2						Optional Work - Grade Raises (In addition to Alternative B with Option 1 or 2)							
								Impacts to Wetlands		Impacts to Deep Water		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands	
								Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.
66	T152N R85W Section24	-101.491847424 47.9781611205	PEMA	Basin	0.11	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
67	T152N R85W Section24	-101.491127454 47.9783320274	PEMA	Drainage Ditch	0.27	Artificial	No	-	-	-	-	0.15	0.09	-	-	-	-	0.15	0.09	-	-	-	-	-	-	-	-		
68	T152N R85W Section24	-101.490188234 47.9781529511	PEMC	Basin	0.41	Natural	No	-	-	-	-	0.06	-	-	-	-	0.06	-	-	-	-	-	-	0.01	-	-	-		
69	T152N R84W Section19	-101.485036667 47.9779482884	PEMC	Basin	0.71	Natural	No	-	-	-	-	0.01	0.01	-	-	-	0.01	0.01	-	-	-	-	-	-	-	-	-		
70	T152N R84W Section19	-101.48453902 47.9782612848	PEMA	Basin	0.06	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
71	T152N R84W Section19	-101.482152428 47.9781327594	PEMC	Basin	2.27	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
72	T152N R84W Section18	-101.475371571 47.9787877466	PEMC	Basin	0.94	Natural	No	-	-	-	-	0.07	0.14	-	-	-	0.07	0.14	-	-	-	-	-	-	-	-	-		
73	T152N R84W Section19	-101.472194885 47.9776220864	PEMC	Basin	3.11	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
74	T152N R84W Section20	-101.459927987 47.9781127645	PEMC	Basin	0.12	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
75	T152N R84W Section20	-101.459116 47.9778167173	PEMC	Basin	0.69	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
76	T152N R84W Section20	-101.458533342 47.978261122	PEMA	Basin	0.05	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
77	T152N R84W Section20	-101.456381869 47.9773605099	PEMC	Basin	4.35	Natural	No	-	-	-	-	0.03	0.15	0.03	73	-	-	0.03	0.15	0.03	73	-	-	-	-	-	-		
78	T152N R84W Section20	-101.45388038 47.978266377	PEMC	Basin	4.14	Natural	No	-	-	-	-	0.04	0.10	-	-	-	0.04	0.10	-	-	-	-	-	-	-	-	-		
79	T152N R84W Section20	-101.45255495 47.9780075473	PEMC	Basin	0.80	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
80	T152N R84W Section20	-101.450424525 47.9782443921	PEMC	Basin	0.33	Natural	No	-	-	-	-	0.03	-	-	-	-	-	0.03	-	-	-	-	-	-	-	-	-		
81	T152N R84W Section20	-101.449142389 47.9782146665	PEMC	Basin	0.21	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
82	T152N R84W Section20	-101.448090973 47.9781357747	PEMC	Basin	1.27	Natural	No	-	-	-	-	0.02	0.24	0.01	23	-	-	0.02	0.23	0.01	23	-	-	-	-	-	-		
83	T152N R84W Section20	-101.445631112 47.9779696356	PEMC	Basin	0.84	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
84	T152N R84W Section21	-101.438549179 47.9771925043	PEMC	Basin	25.16	Natural	No	-	-	-	-	0.07	0.17	0.08	113	-	0.12	0.07	0.17	0.08	113	-	0.12	-	-	-	0.01		
85	T152N R84W Section21	-101.440548319 47.9782348697	PEMC	Basin	0.50	Natural	No	-	-	-	-	0.02	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-		
86	T152N R84W Section21	-101.432128712 47.9782678893	PEMC	Basin	0.45	Natural	No	-	-	-	-	0.06	0.03	-	-	-	-	0.06	0.03	-	-	-	-	-	-	-	-		
87	T152N R84W Section21	-101.426551508 47.9783809541	PEMA	Basin	0.10	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
88A	T152N R84W Section21	-101.423997496 47.9782477075	PEMC	Basin	2.18	Natural	No	-	-	-	-	0.05	0.36	0.08	156	-	-	0.05	0.36	0.08	156	-	-	-	0.15	0.16	2,361		
88B	T152N R84W Section16	-101.425289 47.9792582599	PEM/ABF	Basin	4.67	Natural	No	-	-	-	-	0.04	0.57	-	-	-	-	0.04	0.57	-	-	-	-	-	0.25	0.03	663		

Table 16 – Wetland Table (continued)

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	AC-SOI-4-NH-4-023(016)078				AC-SOI-4-NH-4-023(019)087																		
								Alternative B				Alternative B with Option 1				Alternative B with Option 2						Optional Work - Grade Raises (In addition to Alternative B with Option 1 or 2)								
								Impacts to Wetlands		Impacts to Deep Water		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		
								Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	
89A	T152N R84W Section22	-101.421319855 47.9781514122	PEMC	Basin	12.28	Natural	No	-	-	-	-	0.04	0.22	-	-	-	-	0.04	0.22	-	-	-	-	-	-	0.31	-	-	-	-
89B	T152N R84W Section15	-101.420229188 47.979088081	PEMC	Basin	1.60	Natural	No	-	-	-	-	0.05	0.20	-	-	-	-	0.05	0.20	-	-	-	-	-	-	0.14	-	-	-	-
90	T152N R84W Section22	-101.414339377 47.9783476765	PEMC	Basin	0.69	Natural	No	-	-	-	-	0.04	0.09	-	-	-	-	0.04	0.09	-	-	-	-	-	-	-	-	-	-	
91	T152N R84W Section15	-101.40814153 47.9793520727	PABF	Basin	29.20	Natural	No	-	-	-	-	0.32	1.45	0.13	188	-	-	0.32	1.45	0.13	188	-	-	-	-	-	-	-	-	
92	T152N R84W Section23	-101.400453286 47.9782332625	PEMA	Basin	0.25	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
93	T152N R84W Section23	-101.39953727 47.9782722335	PEMC	Basin	0.49	Natural	No	-	-	-	-	0.02	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	-	-	
94	T152N R84W Section23	-101.396165758 47.9777631599	PEMC	Basin	2.12	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
95	T152N R84W Section23	-101.392771398 47.9784715176	PEMC	Basin	4.46	Natural	No	-	-	-	-	0.08	0.29	-	-	-	0.12	0.08	0.29	-	-	-	0.12	-	0.06	-	-	-	-	0.04
96	T152N R84W Section23	-101.39026089 47.9785705211	PEMA	Drainage Ditch	0.05	Artificial	No	-	-	-	-	0.05	-	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	
97A	T152N R84W Section23	-101.388309435 47.97546053	PABF	Basin	7.71	Natural	No	-	-	-	-	0.05	0.30	0.29	427	-	-	0.05	0.30	0.29	427	-	-	-	0.02	0.05	1,933	-	-	
97B	T152N R84W Section14	-101.388475434 47.9790206548	PABF	Basin	1.45	Natural	No	-	-	-	-	0.03	0.23	0.33	791	-	-	0.03	0.23	0.33	791	-	-	0.02	0.02	0.05	2,631	-	-	
98	T152N R84W Section23	-101.385852475 47.9785802163	PEMA	Drainage Ditch	0.07	Artificial	No	-	-	-	-	0.04	0.03	-	-	-	-	0.04	0.03	-	-	-	-	-	-	-	-	-	-	
99	T152N R84W Section23	-101.381392729 47.9781807469	PEMC	Basin	16.76	Natural	No	-	-	-	-	0.10	0.47	0.05	44	-	-	0.10	0.47	0.05	44	-	-	-	0.24	0.24	1,521	-	-	
100A	T152N R84W Section24	-101.369871933 47.9780791773	PEM/ABF	Basin	0.78	Natural	No	-	-	-	-	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	
100B	T152N R84W Section13	-101.370552127 47.9792429108	PEMC	Basin	16.81	Natural	No	-	-	-	-	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	
101	T152N R84W Section24	-101.367142141 47.978606127	PEMA	Basin	0.04	Natural	No	-	-	-	-	0.03	-	-	-	-	-	0.03	-	-	-	-	-	-	0.01	-	-	-	-	
102	T152N R84W Section24	-101.365500866 47.9784322503	PEM/ABF	Basin	1.79	Natural	No	-	-	-	-	0.11	0.26	-	-	-	-	0.11	0.26	-	-	-	-	-	-	-	-	-	-	
103	T152N R84W Section24	-101.358845138 47.9784174173	PABF	Basin	10.68	Natural	No	-	-	-	-	0.10	0.48	0.02	18	-	-	0.10	0.48	0.02	18	-	-	-	-	-	-	-	-	
104	T152N R83W Section19	-101.350418453 47.9785148403	PEM/ABF	Basin	3.38	Natural	No	-	-	-	-	0.08	0.06	-	-	-	-	0.08	0.06	-	-	-	-	-	-	-	-	-	-	
105	T152N R83W Section19	-101.347956163 47.9786007584	PEMA	Basin	0.05	Natural	No	-	-	-	-	0.05	0.03	-	-	-	-	0.05	0.03	-	-	-	-	-	-	-	-	-	-	
106	T152N R83W Section19	-101.346136567 47.9782952993	PEMA	Basin	0.34	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
107	T152N R83W Section19	-101.344266826 47.9782743251	PEMF	Basin	2.89	Natural	No	-	-	-	-	0.03	0.15	-	-	-	-	0.03	0.15	-	-	-	-	-	0.05	-	-	-	-	
108A	T152N R83W Section19	-101.338763984 47.9779667066	PEMC	Basin	10.50	Natural	No	-	-	-	-	0.40	1.24	0.12	1,786	-	-	0.40	1.18	0.12	1,786	-	-	0.06	0.22	0.27	780	-	-	
108B	T152N R83W Section18	-101.33676117 47.9793617522	PABF	Basin	3.01	Natural	No	-	-	-	-	0.08	0.22	0.19	484	-	-	0.08	0.22	0.19	484	-	-	-	-	0.04	1,274	-	-	

Table 16 – Wetland Table (continued)

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	AC-SOI-4-NH-4-023(016)078				AC-SOI-4-NH-4-023(019)087																	
								Alternative B				Alternative B with Option 1				Alternative B with Option 2				Optional Work - Grade Raises (In addition to Alternative B with Option 1 or 2)									
								Impacts to Wetlands		Impacts to Deep Water		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands	
								Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.
109	T152N R83W Section20	-101.336199424 47.9784656294	PEMC	Basin	0.46	Natural	No	-	-	-	-	-	0.07	-	-	-	-	-	0.07	-	-	-	-	-	0.09	0.02	81	-	-
110	T152N R83W Section20	-101.332911486 47.9783193394	PEMA	Basin	0.24	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111	T152N R83W Section20	-101.324256174 47.9781373041	PEM/ABF	Basin	2.07	Natural	No	-	-	-	-	0.02	0.01	-	-	-	-	0.02	0.01	-	-	-	-	-	-	-	-	-	-
112A	T152N R83W Section20	-101.321273561 47.9785929975	PEMA	Basin	0.12	Natural	No	-	-	-	-	0.04	0.03	-	-	-	-	0.04	0.03	-	-	-	-	-	-	-	-	-	-
112B	T152N R83W Section17	-101.320435089 47.9793555009	PEMC	Basin	2.27	Natural	No	-	-	-	-	0.03	0.09	-	-	-	-	0.03	0.09	-	-	-	-	-	-	-	-	-	-
113A	T152N R83W Section16	-101.308736922 47.9792249947	PEMC	Basin	6.52	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
113B	T152N R83W Section16	-101.302510807 47.9802061096	PEMC	Basin	21.85	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
115	T152N R83W Section16	-101.312880546 47.9794500515	PEM/ABF	Basin	1.56	Natural	No	-	-	-	-	-	0.05	-	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-
116	T152N R83W Section17	-101.316715366 47.9793344175	PEMF	Basin	0.63	Natural	No	-	-	-	-	-	0.09	-	-	-	-	-	0.09	-	-	-	-	-	-	-	-	-	-
118	T152N R83W Section17	-101.327566738 47.9793970374	PEMC	Basin	0.40	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
119	T152N R83W Section17	-101.329978872 47.9793396442	PEMC	Basin	3.07	Natural	No	-	-	-	-	0.02	0.32	0.02	7	-	-	0.02	0.32	0.02	7	-	-	-	-	-	-	-	-
120	T152N R83W Section17	-101.334437556 47.9795388486	PEMC	Basin	0.87	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
122	T152N R83W Section18	-101.343545746 47.9794548333	PEMC	Basin	0.63	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
123	T152N R83W Section18	-101.34771302 47.9790454651	PEMA	Basin	0.04	Natural	No	-	-	-	-	0.02	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	-	-
126	T152N R84W Section14	-101.39061001 47.9788383315	PEMA	Drainage Ditch	0.04	Artificial	No	-	-	-	-	-	0.04	-	-	-	-	-	0.04	-	-	-	-	-	-	-	-	-	-
127	T152N R84W Section14	-101.391254808 47.9788381003	PEMA	Drainage Ditch	0.03	Artificial	No	-	-	-	-	-	0.03	-	-	-	-	-	0.03	-	-	-	-	-	-	-	-	-	-
128	T152N R84W Section14	-101.400467364 47.9789847537	PEMC	Basin	0.24	Natural	No	-	-	-	-	-	0.04	-	-	-	-	-	0.04	-	-	-	-	-	-	-	-	-	-
129	T152N R84W Section15	-101.401499816 47.9789681086	PEM/ABF	Basin	0.57	Natural	No	-	-	-	-	0.05	0.16	-	-	-	-	0.05	0.16	-	-	-	-	-	-	-	-	-	-
130	T152N R84W Section15	-101.410978885 47.978887719	PEMA	Basin	0.10	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
131	T152N R84W Section15	-101.412275173 47.9791231565	PEMA	Basin	0.35	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
134	T152N R84W Section16	-101.432552281 47.9793070047	PEMC	Basin	1.02	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135	T152N R84W Section17	-101.443859878 47.979113661	PABF	Basin	0.86	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
136	T152N R84W Section17	-101.447050728 47.9791331544	PEMC	Basin	3.20	Natural	No	-	-	-	-	0.02	0.02	-	-	-	-	0.02	0.02	-	-	-	-	-	-	-	-	-	-
137	T152N R84W Section17	-101.456450561 47.9786479	PEMA	Basin	0.07	Natural	No	-	-	-	-	0.04	0.02	-	-	-	-	0.04	0.02	-	-	-	-	-	-	-	-	-	-

Table 16 – Wetland Table (continued)

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	AC-SOI-4-NH-4-023(016)078				AC-SOI-4-NH-4-023(019)087																	
								Alternative B				Alternative B with Option 1					Alternative B with Option 2					Optional Work - Grade Raises (In addition to Alternative B with Option 1 or 2)							
								Impacts to Wetlands		Impacts to Deep Water		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands	
								Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.
138	T152N R84W Section17	-101.458747962 47.9791402165	PEMC	Basin	0.06	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
139	T152N R84W Section17	-101.459420558 47.9788262415	PEMC	Basin	0.27	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
140	T152N R84W Section18	-101.473233567 47.9787588928	PEMC	Basin	0.48	Natural	No	-	-	-	-	-	0.08	-	-	-	-	-	0.08	-	-	-	-	-					
141	T152N R84W Section18	-101.477273055 47.97878455	PEMC	Basin	0.33	Natural	No	-	-	-	-	0.04	0.04	-	-	-	-	-	0.04	0.03	-	-	-	-					
142	T152N R84W Section18	-101.483390592 47.9792009026	PEMC	Basin	1.14	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
143	T152N R85W Section13	-101.486065982 47.9790690756	PEMC	Basin	1.59	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
144	T152N R85W Section13	-101.488574728 47.9790161454	PEM/ABF	Basin	0.80	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
145	T152N R85W Section13	-101.490354851 47.9790566093	PEMC	Basin	0.29	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
146	T152N R85W Section13	-101.492059917 47.979010278	PEMA	Basin	0.18	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
147	T152N R85W Section13	-101.493743871 47.9791202618	PEM/ABF	Basin	0.99	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
148	T152N R85W Section13	-101.495146326 47.9787992485	PEMC	Basin	0.77	Natural	No	-	-	-	-	-	0.08	-	-	-	-	-	0.08	-	-	-	-	-					
150	T152N R85W Section13	-101.504284443 47.9790980086	PEMA	Drainage Ditch	0.46	Artificial	No	-	-	-	-	0.09	0.04	-	-	-	-	-	0.09	0.04	-	-	-	-					
151	T152N R85W Section14	-101.52528393 47.9864579196	L2ABG	Basin	65.10	Natural	No	-	-	-	-	0.05	0.58	-	-	-	-	-	0.05	0.58	-	-	0.23	-					
152	T152N R85W Section15	-101.537629127 47.9799662455	PEMC	Basin	0.21	Natural	No	-	-	-	-	0.01	-	-	-	-	-	-	0.01	-	-	-	-	-					
153	T152N R85W Section15	-101.539786601 47.9792674998	PEMA	Basin	0.43	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
154	T152N R85W Section15	-101.541922943 47.9787420802	PEMA	Drainage Ditch	0.25	Artificial	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
155	T152N R85W Section15	-101.546083065 47.9785616534	PEMA	Basin	0.34	Natural	No	-	-	-	-	0.01	0.01	-	-	-	-	-	0.01	0.01	-	-	-	-					
156	T152N R85W Section15	-101.549460362 47.9790558424	PEMC	Basin	1.00	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
157	T152N R85W Section16	-101.551752483 47.9787155293	PEMA	Basin	0.29	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
158	T152N R85W Section16	-101.565467221 47.9785666955	PEMA	Basin	0.31	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
161	T152N R85W Section17	-101.586255813 47.9786099768	PEMC	Basin	1.13	Natural	No	-	-	-	-	-	0.19	-	-	-	-	-	-	0.19	-	-	-	-					
162	T152N R85W Section17	-101.593149875 47.978912411	PEMC	Basin	0.93	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
164	T152N R85W Section18	-101.61339691 47.9784623549	PEMC	Basin	0.28	Natural	No	-	-	-	-	-	0.05	-	-	-	-	-	-	0.05	-	-	-	-					
165	T152N R86W Section13	-101.618288207 47.9786460404	PEMC	Basin	1.17	Natural	No	-	-	-	-	-	0.07	-	-	-	-	-	-	0.07	-	-	-	-					

Table 16 – Wetland Table (continued)

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	AC-SOI-4-NH-4-023(016)078				AC-SOI-4-NH-4-023(019)087																		
								Alternative B				Alternative B with Option 1				Alternative B with Option 2				Optional Work - Grade Raises (In addition to Alternative B with Option 1 or 2)										
								Impacts to Wetlands		Impacts to Deep Water		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		
								Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	
166	T152N R86W Section13	-101.622316693 47.9787132985	PEMA	Basin	0.24	Natural	No	-	-	-	-	0.02	0.01	-	-	-	-	0.02	0.01	-	-	-	-	-	-	-	-	-	-	-
167	T152N R86W Section13	-101.626333009 47.9783584857	PEMA	Basin	0.07	Natural	No	-	-	-	-	0.01	0.01	-	-	-	-	0.01	0.01	-	-	-	-	-	-	-	-	-	-	
168	T152N R86W Section13	-101.628439078 47.9793311668	PEMfd	Basin	14.68	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
169	T152N R86W Section13	-101.632767695 47.9782907742	PEMA	Basin	0.28	Natural	No	-	-	-	-	-	0.07	-	-	-	-	-	0.07	-	-	-	-	-	-	-	-	-	-	
171	T152N R86W Section14	-101.644025271 47.9798854489	PEMF	Basin	11.05	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
172	T152N R86W Section14	-101.64782683 47.9796684599	PABF	Basin	4.21	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
174	T152N R86W Section14	-101.655163599 47.9784649136	PEMC	Basin	0.31	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	-	-	
175	T152N R86W Section15	-101.65925949 47.9790080507	PABF	Basin	3.27	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
176	T152N R86W Section15	-101.67407176 47.9786078195	PEMC	Basin	0.65	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
177	T152N R86W Section15	-101.67896751 47.9794092177	PEMC	Basin	1.70	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
178	T152N R86W Section16	-101.683671367 47.9789162162	PABF	Basin	5.65	Natural	No	-	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
179	T152N R86W Section16	-101.692668045 47.9785186079	PEMC	Basin	0.35	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
180	T152N R86W Section16	-101.695965653 47.9798229825	PABF	Basin	15.46	Natural	No	0.03	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
181	T152N R86W Section16	-101.700162723 47.9790189704	PEMC	Basin	0.55	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
182	T152N R86W Section17	-101.703236934 47.9785882524	PEMC	Basin	1.17	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
184	T152N R86W Section18	-101.738851868 47.9786983858	PEMC	Basin	3.81	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
185	T152N R86W Section18	-101.74175753 47.9784066105	PEMC	Basin	0.17	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
186	T152N R87W Section14	-101.766298809 47.9781524016	PEMA	Drainage Ditch	0.18	Artificial	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
187	T152N R87W Section14	-101.766175091 47.9787256418	PEMC	Basin	0.48	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
188	T152N R87W Section14	-101.76814167 47.9786017585	PEMA	Basin	6.19	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
189	T152N R87W Section14	-101.774623303 47.9784918245	PEMA	Basin	4.32	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
190	T152N R87W Section14	-101.778088221 47.9781988262	PEMC	Basin	0.10	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
191	T152N R87W Section 14	-101.783869 47.978523	PEMA	Basin	0.28	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
192	T152N R87W Section15	-101.807084958 47.9783549372	PEMA	Basin	0.90	Natural	No	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 16 – Wetland Table (continued)

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	AC-SOI-4-NH-4-023(016)078				AC-SOI-4-NH-4-023(019)087																	
								Alternative B				Alternative B with Option 1				Alternative B with Option 2				Optional Work - Grade Raises (In addition to Alternative B with Option 1 or 2)									
								Impacts to Wetlands		Impacts to Deep Water		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands		Impacts to Wetlands		Impacts to Deep Water		Impacts to USFWS Easement Wetlands	
								Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.	Temp.	Perm.	Acres	Cubic Yards	Temp.	Perm.
193	T152N R87W Section16	-101.827894382 47.9783580168	PEMC	Basin	1.17	Natural	No	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
194	T152N R87W Section17	-101.844801266 47.978124303	PEMC	Basin	0.46	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
195	T152N R87W Section17	-101.847978371 47.9784576281	PEMA	Basin	0.33	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
196	T152N R87W Section17	-101.849072533 47.978052361	PEMA	Drainage Ditch	0.20	Artificial	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
197	T152N R87W Section18	-101.850356346 47.9783117669	PEMC	Basin	0.48	Natural	No	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
198	T152N R87W Section18	-101.856290485 47.9784893356	PEMF	Basin	3.25	Natural	No	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
199	T152N R87W Section18	-101.858318104 47.9780979575	PEMC	Drainage Ditch	0.06	Artificial	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
200	T152N R87W Section18	-101.858754216 47.9782736357	PEMC	Drainage Ditch	0.06	Artificial	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
201	T152N R83W Section16	-101.295383673 47.9807673264	PEMC	Basin	5.01	Natural	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Sub Totals								0.58	1.32	-	-	4.37	18.23	2.40	9,589	-	0.29	4.37	18.04	2.40	9,589	-	0.29	0.11	3.92	2.75	33,685	-	0.99
Project Totals								0.58	1.32	-	-	Project Total - Alternative B with Option 1 plus Optional Work Grade Raises								4.48	22.15	5.15	43,274	-	1.28				
																Project Total - Alternative B with Option 2 plus Optional Work Grade Raises								4.48	21.96	5.15	43,274	-	1.28

*A wetland Jurisdictional Determination was issued by the USACE on 11/01/2011; NWO-2011-2036-BIS

F. Water Body Modification, Wildlife, and Invasive Plant Species

The project alignment passes between Tangedahl Lake and Lake Vernon. With proper installation of erosion control devices, the lakes should not be impacted by sedimentation or runoff from the reconstruction.

Through consultation with the North Dakota Parks and Recreation Department, three plants or significant ecological communities of interest were identified within a one-mile radius of the proposed project. They are the Western porcupine grass prairie, Needle-and-thread mixed grass prairie, and Bullrush freshwater marsh. Disturbed areas will be replanted with species native to the area.

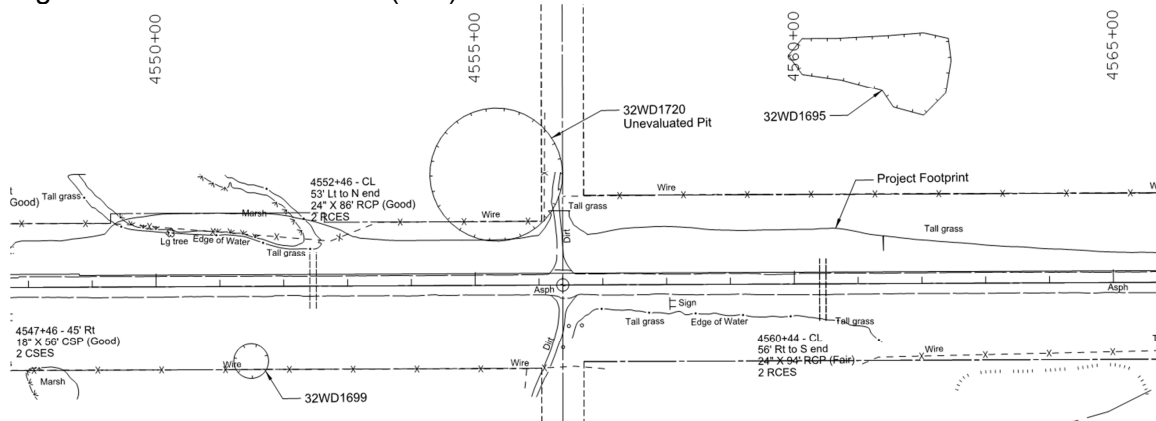
G. Threatened and Endangered Species

The US Fish & Wildlife (USFWS) website indicated that 5 species occur in Ward County. These include the endangered Whooping Crane and Gray Wolf; as well as the threatened Piping Plover; candidate species Sprague's Pipet and Dakota Skipper, and Designated Critical Habitat for Piping Plover. See Appendix A for the Affect Determination Table. Based on the scope of work this project will have "No effect" on the known species or critical habitat.

H. Cultural Resources

Beaver Creek Archaeology completed a cultural resources report and it was submitted to the NDDOT on 9/27/2011. Along project AC-SOI-NH-4-023(016)078 one potential impact was identified during the class III intensive survey. Site number 32WD1720 is located at RP 86.272 and is categorized as an unevaluated pit. Avoidance is recommended.

Figure 9 – AC-SOI-NH-4-023(016)078 Cultural Site 1



Project AC-SOI-NH-4-023(019)087 has four potential cultural resource impacts identified during the class III intensive survey. Site number 32WD1696 is located at RP 87.822 and is categorized as a cairn and depressions. The second site number is 32WD1697 is located at RP 88.083 and is categorized as a cairn and stone circle. The third site number is 32WD1706 is located at RP 89.512 and is categorized as two cairns and a

stone circle. The final site number is 32WD1718 is located at RP 97.964 and is categorized as an unevaluated stone feature.

Figure 10 – AC-SOI-NH-4-023(019)087 Cultural Site 1 & 2

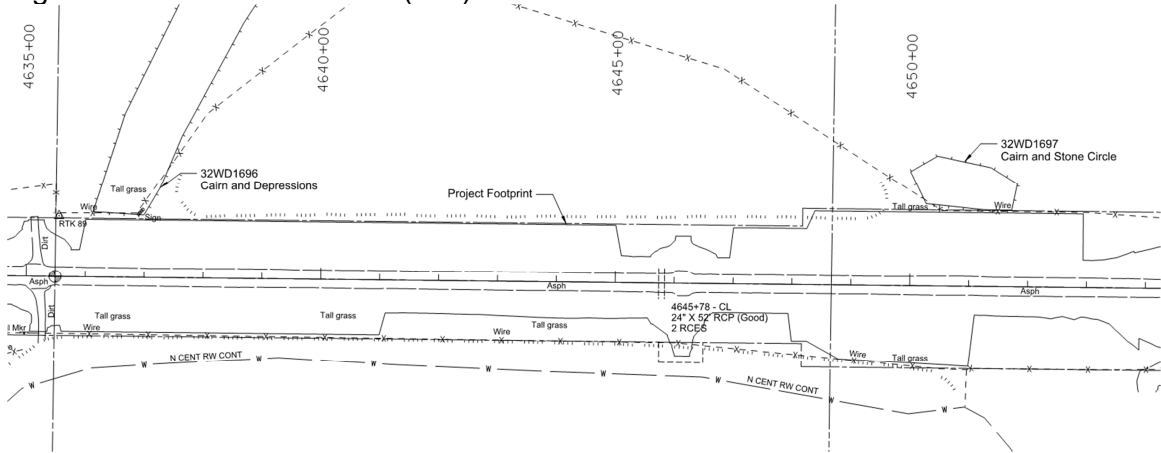


Figure 11 – AC-SOI-NH-4-023(019)087 Cultural Site 3

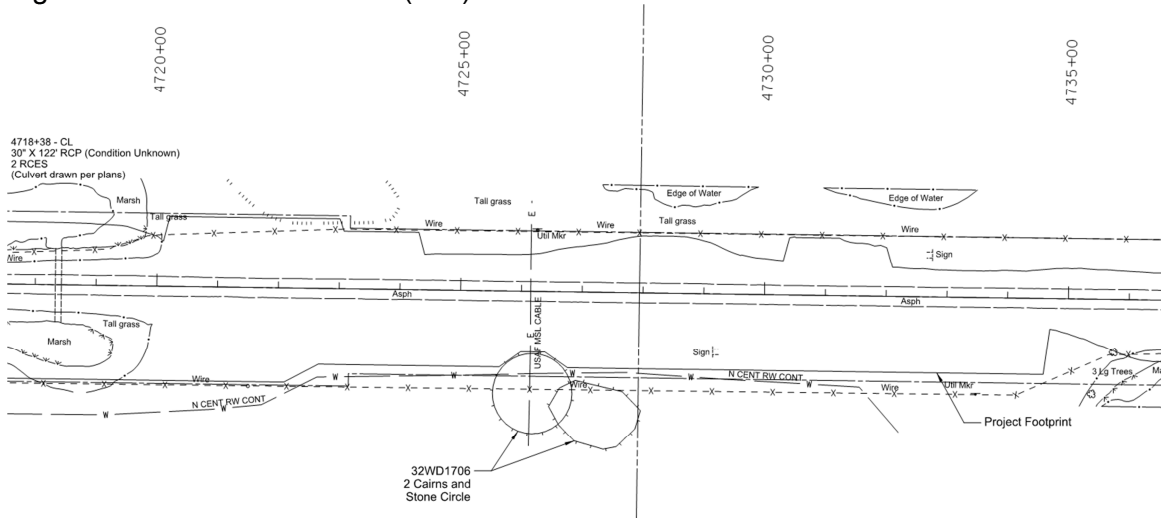
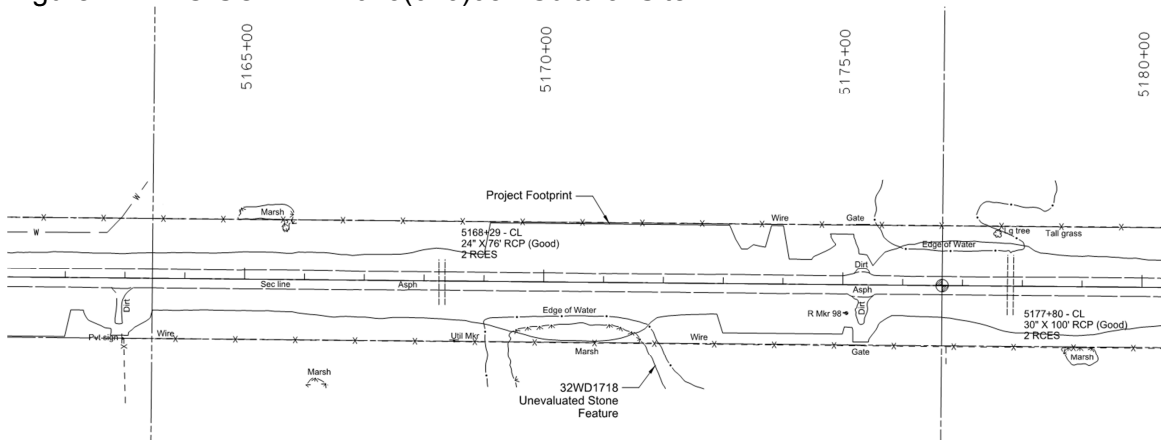


Figure 12 – AC-SOI-NH-4-023(019)087 Cultural Site 4



None of the above listed sites have been evaluated for the National Register but stone feature sites are generally considered eligible by our Tribal Partners and are valued for preservation in place. All sites will be avoided during construction. The sites will be fenced for avoidance and construction near the sites will be monitored by an archeologist or representative from the Three Affiliated Tribes Tribal Historic Preservation office. A finding of No Adverse Effect was acceptable to the Three Affiliated Tribes Tribal Historic Preservation Office and the ND State Historic Preservation office as long as impacts to these sites are avoided during final design and construction (#12-5303).

I. Temporary Construction

1. Noise

Noise increases will be noticeable during construction. After construction, the project will not produce any changes in the current noise levels. The North Dakota Department of Health stated noise impacts can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order and by ensuring construction activities are not conducted during early morning or late evening hours.

2. Air Quality

Temporary air quality issues may result from diesel-powered construction equipment and dust from construction activities. The North Dakota Department of Health indicated the proposed construction project could be completed with minor impacts if all necessary measures, such as the use of watering or the application of stabilizing agents, be taken to minimize fugitive dust emissions during construction activities. As well as any complaints that may arise are dealt with in an efficient and effective manner.

3. Water Quality

Potential water quality impacts resulting from increased erosion and sedimentation and reduced slope stability during construction are expected to be minor and temporary. The use of standard Best Management Practices, such as silt fence, and compliance with applicable permit conditions will further minimize water quality impacts. The North Dakota Department of Health recommends minimal disturbance of stream beds in order to prevent siltation as well as replacement of disturbed vegetation as soon as possible after project completion to prevent soil erosion.

J. Section 4(f) and 6(f) involvement

The USFWS has indicated additional wetland and grassland easements exist along ND Highway 23. They were identified in the following locations:

Ward County Wetland Easements

- T-152-N, R-87-W, Sections 13, 14, 16, 17 and 24
- T-152-N, R-86-W, Sections 13, 14, 15, 16, 17, 18, 19, 20, 21, 22 and 23
- T-152-N, R-85-W, Sections 15, 16, 17, 18, 19, 20 and 21

- T-152-N, R-84-W, Sections 14, 16, 17, 20, 21, 22, 23 and 24
- T-152-N, R-83-W, Sections 17, 18 and 19

Ward County Grassland Easements

- T-152-N, R-86-W, Sections 15, 16, 17, 19 and 20
- T-152-N, R-84-W, Section 18

Due to the additional right of way needed some of the above listed wetland easements will be affected outside of the existing right of way. Therefore, a Service permit and Section 4(f) evaluation may be required in accordance with USFWS requirements depending on the extent of the impacts.

A summary of USFWS easement impacts by project and alternative is below. All impact quantities are based on breaking of the inslope from 4:1 to 3:1 beyond the clear zone in order to minimize impacts to USFWS easements.

AC-SOI-NH-4-023(016)078

- 0.00 acres Wetland Easement
- 0.00 acres Grassland Easement

AC-SOI-NH-4-023(019)087

Alternative B with Option 1 or 2

- 0.29 acres Wetland Easement
- 0.00 acres Grassland Easement

Optional Work – Grade Raises (acres in addition to Alternative B with Option 1 or 2)

- 0.99 acres Wetland Easement, for a total of 1.28 acres Wetland Easement impacts
- 0.00 acres Grassland Easement, for a total of 0.00 acres of Grassland Easement impacts

K. Unaffected Impacts

There are no anticipated affects to the following impacts:

- Relocations
- Pedestrian/Bicyclists
- State Scenic River
- Hazardous Waste
- Visual
- Energy
- Low Income and Minority Living Areas
- Floodplain
- Trees

V. Environmental Commitments and Permitting

A. Environmental Commitments

- Unavoidable impacts to wetlands due to project AC-SOI-NH-4-023(016)078 will be mitigated onsite. Approximately 0.64 natural/jurisdictional , 0.63 natural/non-jurisdictional, 0.00 artificial/jurisdictional and 0.05 artificial/non-jurisdictional acres of wetlands will be impacted permanently and 0.58 acres will be impacted temporarily.
- Unavoidable impacts to wetlands due to project AC-SOI-NH-4-023(019)087 will be mitigated onsite. Approximately 0.00 natural/jurisdictional , 21.80 natural/non-jurisdictional, 0.00 artificial/jurisdictional and 0.35 artificial/non-jurisdictional acres of wetlands will be impacted permanently and 4.48 acres will be impacted temporarily.
- Impacts to USFWS easement wetlands were reduced and grassland easements were avoided by utilizing a 3:1 inslope outside the clear zone along the project corridor.

B. Permits

Permits required for the project

- US Fish and Wildlife – An easement exchange due to impacts to easement wetlands.
- US Army Corps of Engineers – Section 404 and/or Section 10 permits
- Canadian Pacific Rail – Permit to work in railroad right of way

VI. Public Involvement

Solicitation of views letters were sent to various agencies per the NDDOT Design Manual on March 10, 2011. A copy of the letters and list of agencies solicited are included in Appendix A. No further public involvement is anticipated.



U.S. Department of Transportation
Federal Highway Administration ND Division

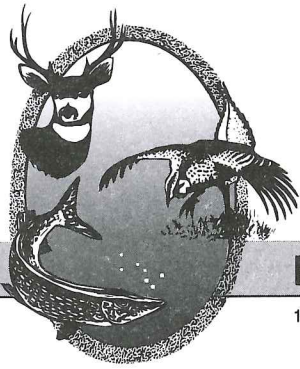


North Dakota Department of Transportation
SFN 18878 - REV 07/07

PROJECT		PCN	
LOCATION		REQUESTED DATE / BID DATE	
LENGTH		SUBMITTED BY / DATE	
NATURE OF WORK		CONTACT / PHONE	
		<small>For FHWA Use Only</small> DATE IN COMMENTS DUE	
PROJECT STATUS			
ENVIRONMENTAL DOCUMENT			

COMMENTS

FEDERAL HIGHWAY ADMINISTRATION			
Signature		Date	
Name		Title	



"VARIETY IN HUNTING AND FISHING"

NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

RECEIVED

APR 06 2011

Houston Engineering, Inc.

March 31, 2011

Richard Gunderson, PE
Houston Engineering, Inc.
1401 21st Avenue North
Fargo, ND 58102

Dear Mr. Gunderson:

RE: 4-023(016)078, PCN 19206

This project consists of widening and resurfacing ND Highway 23 from US Highway 83 to the Ward / Mountrail County Line. Additionally, turn lanes at intersections and passing lanes may be studied as part of the project.

The National Wetland Inventory indicates various wetlands within the proposed project corridor. We recommend that any unavoidable destruction or degradation of wetland acres be mitigated in kind, erosion control measures be implemented to minimize sedimentation, and disturbed areas be seeded with suitable native grass and forb species where appropriate.

Sincerely,

A handwritten signature in blue ink, appearing to read "Paul Schadewald".

Paul Schadewald
Chief
Conservation & Communication Division

js



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
3425 Miriam Avenue
Bismarck, North Dakota 58501



APR 11 2011

RECEIVED

Mr. Richard Gunderson, P.E.
Houston Engineering, Inc.
1401 21st Avenue North
Fargo, North Dakota 58102

APR 14 2011

Houston Engineering, Inc

Re: Project No. 4-023(016)078, PCN 19206
ND Highway 23, US 83 to Mountrail Co. Line
Ward County, North Dakota

Dear Mr. Gunderson:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter of March 10, 2011, concerning the North Dakota Department of Transportation's plans to complete roadway improvements on ND Highway 23, from US Highway 83 to the Ward/Mountrail County Line. The proposed project consists of widening and resurfacing so that load restrictions are no longer necessary. The large amount of oil field development truck traffic is driving this need. Turn lanes at intersections and passing lanes may be studied as part of this project. This project, or the first phase, is expected to be constructed during the 2012 construction season. We offer the following comments to assist with the project planning process in accordance with the provisions of the National Environmental Policy Act (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended), the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds", the Endangered Species Act (16 U.S.C. 1531 et seq.), and Executive Order 11990 concerning the protection of wetlands.

The National Wetland Inventory maps and recent aerial photography for the project area indicate the presence of wetland habitat immediately adjacent to planned grade raise project. Wetlands provide valuable habitat for migratory birds, including ducks, geese, and shorebirds. The Service recommends taking precautions to avoid impacts to wetland resources by maintaining existing drainage patterns and culvert elevations, and by minimizing the placement of fill in wetlands. If the planned roadway improvements will impact wetland resources, a wetland delineation should be completed to identify the wetlands in the project area and determine the extent of unavoidable losses. The Service recommends restoring an equal acreage of drained wetland habitat or using credits from a wetland mitigation bank established by the North Dakota Department of Transportation to mitigate unavoidable wetland losses. Please provide this office a copy of the wetland mitigation plan, if project construction results in unavoidable losses of wetland resources.

To further reduce environmental impacts, we recommend that the following measures be implemented during construction:

1. Develop and implement a project erosion control plan to minimize soil loss. Silt fences should be installed in areas where the existing vegetative cover will be stripped to prevent sediment from accumulating in shallow water wetlands. Floating turbidity barriers should be installed in open water locations to isolate the construction site from the main body of the wetland.
2. Promptly seed all uplands areas that are disturbed during construction with a native grass mixture suited for the soils in the project area. Coconut matting or other effective erosion material should be installed on steep slopes to help ensure the initial planting is successful.
3. Obtain the needed riprap material from upland sites in a manner that will not impact important wildlife habitats, including wetlands, woodlands, or native prairie.
4. Use clean rock to protect the roadway from wave erosion and ice action.

The Service administers property interests immediately adjacent to ND Highway 23 as part of the National Wildlife Refuge System in the following areas.

Ward County Wetland Easements:	<u>T. 152 N., R. 87 W.,</u>	Sections 13, 14, 16, 17, and 24
	<u>T. 152 N., R. 86 W.,</u>	Sections 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, and 23
	<u>T. 152 N., R. 85 W.,</u>	Sections 15, 16, 17, 18, 19, 20, and 21
	<u>T. 152 N., R. 84 W.,</u>	Sections 14, 16, 17, 20, 21, 22, 23, and 24
	<u>T. 152 N., R. 83 W.,</u>	Sections 17, 18, and 19
Ward County Grassland Easements:	<u>T. 152 N., R. 86 W.,</u>	Sections 15, 16, 17, 19, and 20
	<u>T. 152 N., R. 84 W.,</u>	Section 18

If Service easements are affected outside of the existing road right-of-way, a Service permit and Section 4(f) evaluation, including an environmental assessment will be required. Please contact Lloyd Jones, Project Leader, Audubon National Wildlife Refuge, 3275 11th St. NW, Coleharbor, ND 58531-9419; Phone: (701)442-5474, to determine if Service property interests will be affected and to obtain the necessary permits. Cultural resource field investigations occurring on Service grassland and wetland easement tracts and fee title lands require coordination with the Zone Archeologist early in the project planning and NEPA review process. Please contact Mr. Barry Williams, Dakota Zone Archeologist at barry_williams@fws.gov or (701) 355-8577 to coordinate archeological reviews and obtain the necessary permits.

A list of federally threatened and endangered species that have been documented in Ward County is enclosed. This list fulfills requirements of the Service under Section 7 of the Endangered Species Act.

If a Federal agency authorizes, funds, or carries out a proposed action, the responsible Federal agency, or its delegated agent, is required to evaluate whether the proposed action "may affect" listed species. If the Federal agency determines the action "may affect, is likely to adversely affect" a listed species, then the responsible Federal agency will need to consult with this office. If the evaluation shows a "no effect" situation on the listed species, further consultation is not necessary. At this time, the Service is not aware of any listed species in the project area.

The Service does not object to the proposed project, provided the recommendations provided in this letter are incorporated into the project's construction plan. Thank you for the opportunity to provide comments on the proposed roadway improvement project on Highway 23, from US Highway 83 to the Ward/Mountrail County Line. If further information is needed, please contact me or Terry Ellsworth of my staff at 250-4481 or at the letterhead address.

Sincerely,



Jeffrey K. Towner
Field Supervisor
North Dakota Field Office

Enclosure

cc: Project Leader, Audubon NWR
(Attn: K. Baer, J. Beyer)
Director, ND Game and Fish Dept., Bismarck
(Attn: Paul Schadewald)

FEDERAL THREATENED, ENDANGERED, AND CANDIDATE SPECIES
AND DESIGNATED CRITICAL HABITAT FOUND IN
WARD COUNTY, NORTH DAKOTA

ENDANGERED SPECIES

Birds

Whooping crane (Grus Americana): Aransas-Wood Buffalo Population (264 birds) occurs in North Dakota counties during spring and fall migration between breeding and wintering areas. Whooping cranes prefer to roost overnight in shallow open water wetland habitat with good visibility during migration stopovers.

Mammals

Gray wolf (Canis lupus): Occasional visitor in North Dakota. Most frequently observed in the Turtle Mountains area.

THREATENED SPECIES

Birds

Piping plover (Charadrius melodus): Nests on midstream sandbars of the Missouri and Yellowstone Rivers and along shorelines of saline wetlands. More nest in North Dakota than any other state.

CANDIDATE SPECIES

Birds

Sprague's Pipit (Anthus spragueii): Nests in native and planted grassland. Prefers patches of grassland at least 72 acres (29 hectares).

Invertebrates

Dakota skipper (Hesperia dacotae): Found in native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily, harebell, and smooth camas; 2) upland (dry) prairie on ridges and hillsides dominated by bluestem grasses, needlegrass, pale purple and upright coneflowers and blanketflower.

DESIGNATED CRITICAL HABITAT

Birds

Piping Plover - Alkali Lakes and Wetlands - Critical habitat includes: (1) shallow, seasonally to permanently flooded, mixosaline to hypersaline wetlands with sandy to gravelly, sparsely vegetated beaches, salt-encrusted mud flats, and/or gravelly salt flats; (2) springs and fens along edges of alkali lakes and wetlands; and (3) adjacent uplands 200 feet (61 meters) above the high water mark of the alkali lake or wetland.



North Dakota Department of Transportation

Francis G. Ziegler, P.E.
Director

Jack Dalrymple
Governor

November 23, 2011

Merl Paaverud
ND State Historic Preservation Officer
ND Heritage Center
612 East Boulevard Avenue
Bismarck, ND 58505-0830

Attn: Lisa Steckler, Project Review Coordinator

NDDOT PROJECT SAP-4-023(016)078, PCN: 19206

Project Type: Culvert Rehabilitation, subcut, and slope flattening improvements.

NDDOT Project #: SAP-4-023(016)078 **PCN:** 19206

Project Description: Sections 15-22, T152N, R83W; Sections 13-24, T152N R84W; Sections 13-24, T152N R85W; Sections 13-24, T152N, R86W; Sections 13-24, T152N R87W.

Records Search: The file search revealed 20 sites, three site leads, two isolated finds and 15 manuscripts recorded within the APE sections.

NDDOT Approach: Five new archaeological sites were recorded and two new historic sites were recorded within and adjacent to the APE.

Consultation is still required with the engineering firm regarding any potential impacts, avoidance, and reroute. An addendum will be completed after consultation occurs.

Agency Determination: Undetermined at this time. We will continue consultation with your office.

We request your consideration of this project, and your concurrence with the above determination.

Valerie J. Bluemle
Archaeologist
Cultural Resources, ETS
attachments



**STATE
HISTORICAL
SOCIETY
OF NORTH DAKOTA**

Jack Dalrymple
Governor of North Dakota

December 5, 2011

North Dakota
State Historical Board

Ms. Valerie Bluemle
Archaeologist, ETS Division
Dep't of Transportation
608 East Boulevard Avenue
Bismarck, ND 58505-0700

Gerold Gerntholz
Valley City - President

Calvin Grinnell
New Town - Vice President

A. Ruric Todd III
Jamestown - Secretary

Albert I. Berger
Grand Forks

Diane K. Larson
Bismarck

Chester E. Nelson, Jr.
Bismarck

Margaret Puetz
Bismarck

Sara Otte Coleman
*Director
Tourism Division*

Kelly Schmidt
State Treasurer

Alvin A. Jaeger
Secretary of State

Mark Zimmerman
*Director
Parks and Recreation
Department*

Francis Ziegler
*Director
Department of Transportation*

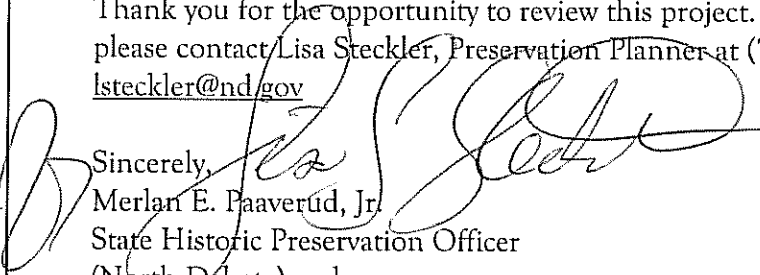
Merlan E. Paaverud, Jr.
Director

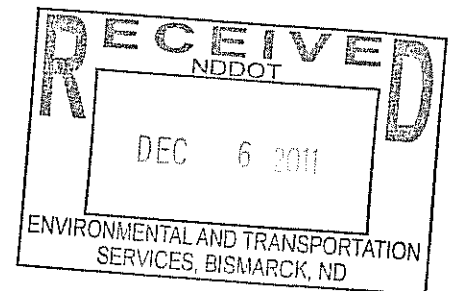
ND SHPO Ref.: 12-5303 NDDOT SAP-4-023(016)078; PCN 19206,
"Highway 23 from Mountrail County Line (RP 78.40 to US 83 (RP 105.517)
Right-of-Way Survey: A Class III Cultural Resources Inventory in Ward
County, North Dakota" in portions of [T152N R83W Sections 15-22][T152N
R84 W Sections 13-24][T152N R85W Sections 13-24][T152N R86W Sections
13-24] & [T152N R87W Sections 13-24]

Dear Ms. Bleumle,

We reviewed ND SHPO Ref.: 12-5303 NDDOT SAP-4-023(016)078; PCN 19206, "Highway 23 from Mountrail County Line (RP 78.4) to US 83 (RP 105.517) Right-of-Way Survey: A Class III Cultural Resources Inventory in Ward County, North Dakota" in portions of [T152N R83W Sections 15-22][T152N R84 W Sections 13-24][T152N R85W Sections 13-24][T152N R86W Sections 13-24] & [T152N R87W Sections 13-24] and find the report by Bill Suess and Christina Burns acceptable. We appreciate the opportunity to review this report and look forward to your final determinations.

Thank you for the opportunity to review this project. If you have any questions please contact Lisa Steckler, Preservation Planner at (701) 328-3577, e-mail lsteckler@nd.gov

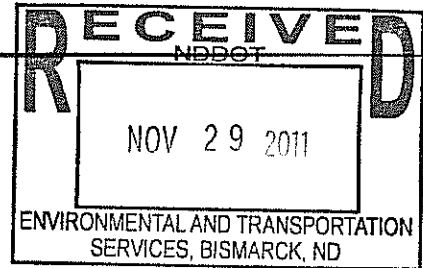
Sincerely,

Merlan E. Paaverud, Jr.
State Historic Preservation Officer
(North Dakota) and
Director
State Historical Society of North Dakota



Accredited by the
American Association
of Museums since 1989



**STATE
HISTORICAL
SOCIETY
OF NORTH DAKOTA**



Jack Dalrymple
Governor of North Dakota

November 28, 2011

North Dakota
State Historical Board

Ms. Valerie Bluemle
Archaeologist, ETS Division
Dep't of Transportation
608 East Boulevard Avenue
Bismarck, ND 58505-0700

Gereld Gertholz
Valley City - President

Calvin Grinnell
New Town - Vice President

A. Ruric Todd III
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ND SHPO Ref.: 12-5303 NDDOT SAP-4-023(016)078; PCN 19206,
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R84 W Sections 13-24][T152N R85W Sections 13-24][T152N R86W Sections
13-24] & [T152N R87W Sections 13-24]

Albert I. Berger
Grand Forks

Diane K. Larson
Bismarck

Chester E. Nelson, Jr.
Bismarck

Dear Ms. Bleumle,

Margaret Puetz
Bismarck

We reviewed ND SHPO Ref.: 12-5303 NDDOT SAP-4-023(016)078; PCN 19206, "Highway 23 from Mountrail County Line (RP 78.40 to US 83 (RP 105.517) Right-of-Way Survey: A Class III Cultural Resources Inventory in Ward County, North Dakota" in portions of [T152N R83W Sections 15-22][T152N R84 W Sections 13-24][T152N R85W Sections 13-24][T152N R86W Sections 13-24] & [T152N R87W Sections 13-24] and find the report by Bill Suess and Christina Burns acceptable. We concur with a "No Historic Properties Affected" determination, provided that the project is of the nature specified and takes place in the mapped location provided, and provided that all borrow comes from an approved source.

Sara Otte Coleman
*Director
Tourism Division*

Kelly Schmidt
State Treasurer

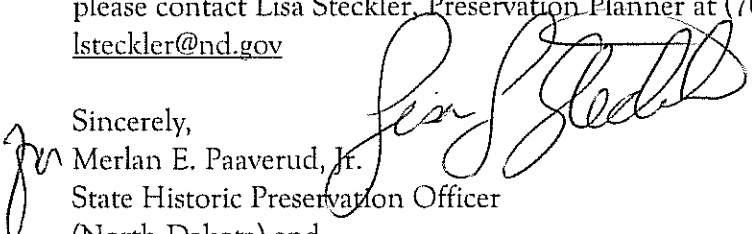
Alvin A. Jaeger
Secretary of State

Thank you for the opportunity to review this project. If you have any questions please contact Lisa Steckler, Preservation Planner at (701) 328-3577, e-mail lsteckler@nd.gov

Mark Zimmerman
*Director
Parks and Recreation
Department*

Francis Ziegler
*Director
Department of Transportation*

Merlan E. Paaverud, Jr.
Director

Sincerely,

Merlan E. Paaverud, Jr.
State Historic Preservation Officer
(North Dakota) and
Director
State Historical Society of North Dakota

Accredited by the
American Association
of Museums since 1989

RP 87.242 TO RP 105.511				
Traffic	Average Daily			Max.Hr.
Current 2010	Pass: 1,485	Trucks: 315	Total: 1,800	180
Forecast 2030	Pass: 2,125	Trucks: 450	Total: 2,575	260
Clear Zone Distance: 4:1 - 42 ft		10:1 - 28 ft		Design Speed: 65 mph
Minimum Sight Dist. for Stopping: 645 ft		Bridges: NA		
Minimum Sight Dist. for Safe Passing: 2,285 ft				
Sight Dist. for No Passing Zone: 1,100 ft				
Pavement Design Life 20 (years)				

JOB#
NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

AC-SOI-NH-4-023(019)087

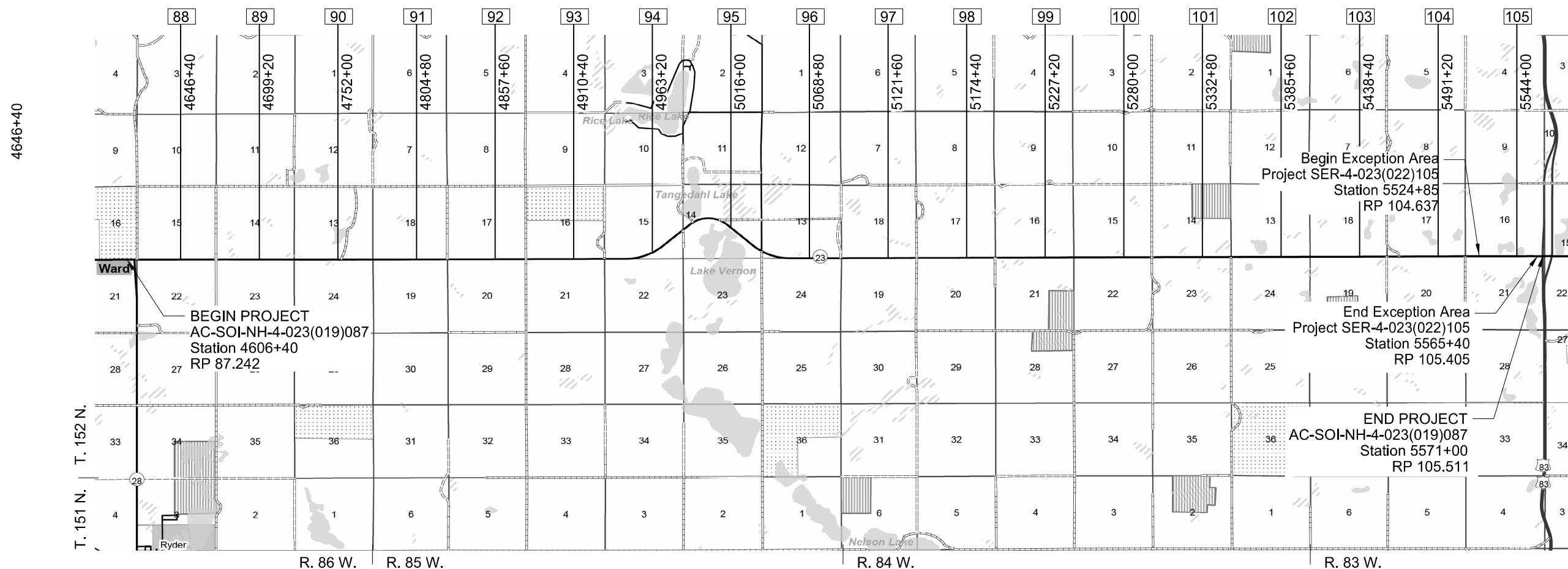
FHWA Non-Involvement
Ward County
Junction ND 28 West to US 83
Widening
Mine & Blend
HBP Surfacing
Passing Lanes
Grade Raises
Incidentals

STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	19376	1	1

GOVERNING SPECIFICATIONS:

Standard Specifications adopted by the North Dakota Department of Transportation October 2008; Standard Drawings currently in effect; and other Contract Provisions submitted herein.

PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES
AC-SOI-NH-4-023(019)087	17.501	18.269



DESIGNERS

DISTRICT REVIEW

MINOT DISTRICT

APPROVED DATE _____

OFFICE OF PROJECT DEVELOPMENT
ND DEPARTMENT OF TRANSPORTATION

I hereby certify that the attached plans were prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of ND.


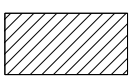
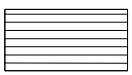
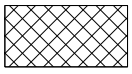
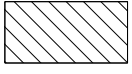
APPROVED DATE _____

HOUSTON ENGINEERING INC, FARGO ND

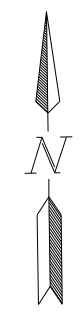
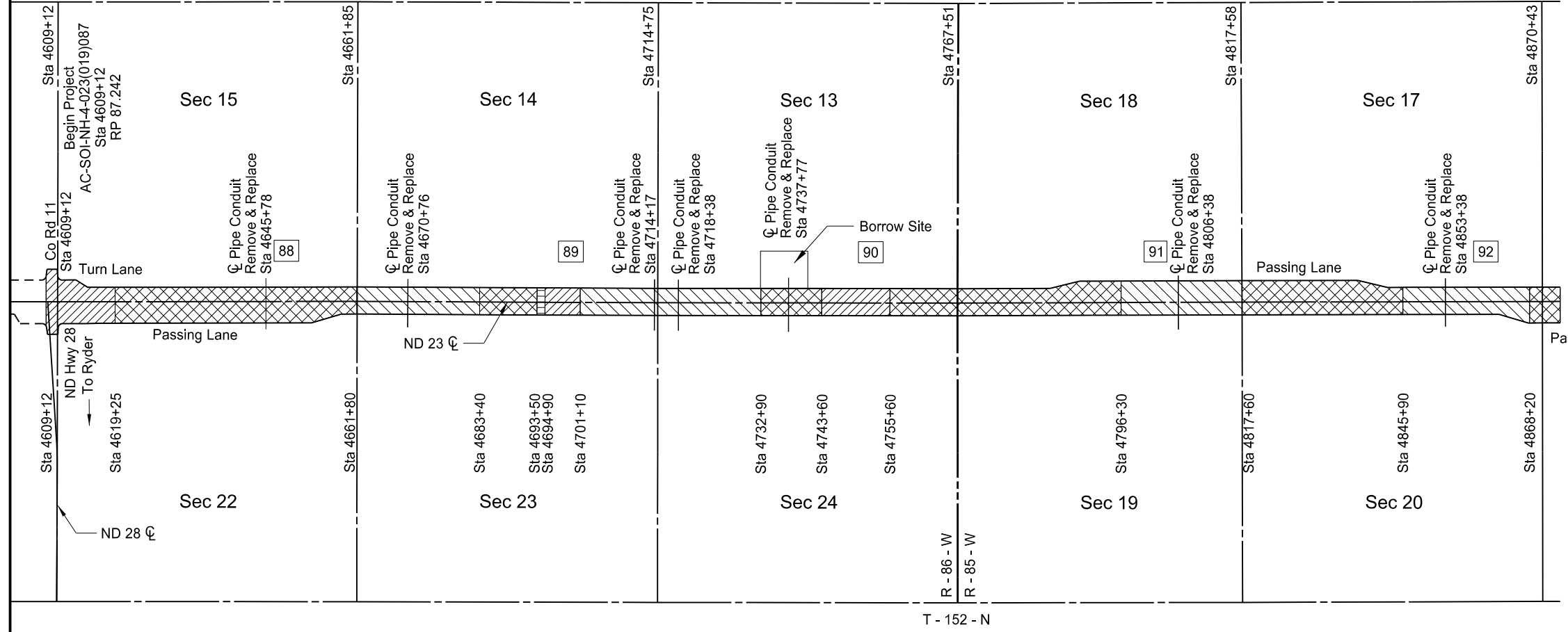
This document
is preliminary
and not for
construction or
implementation
purposes.

PRELIMINARY

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	4	1

-  88 Reference Marker
-  Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base
-  3' Subgrade Removal, Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base
-  Mine and Blend, 6" Superpave FAA 45 on 18" Blended Base
-  Construct Grade Raise, Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base

Ward County


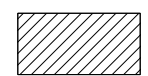
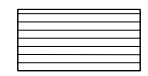
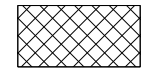



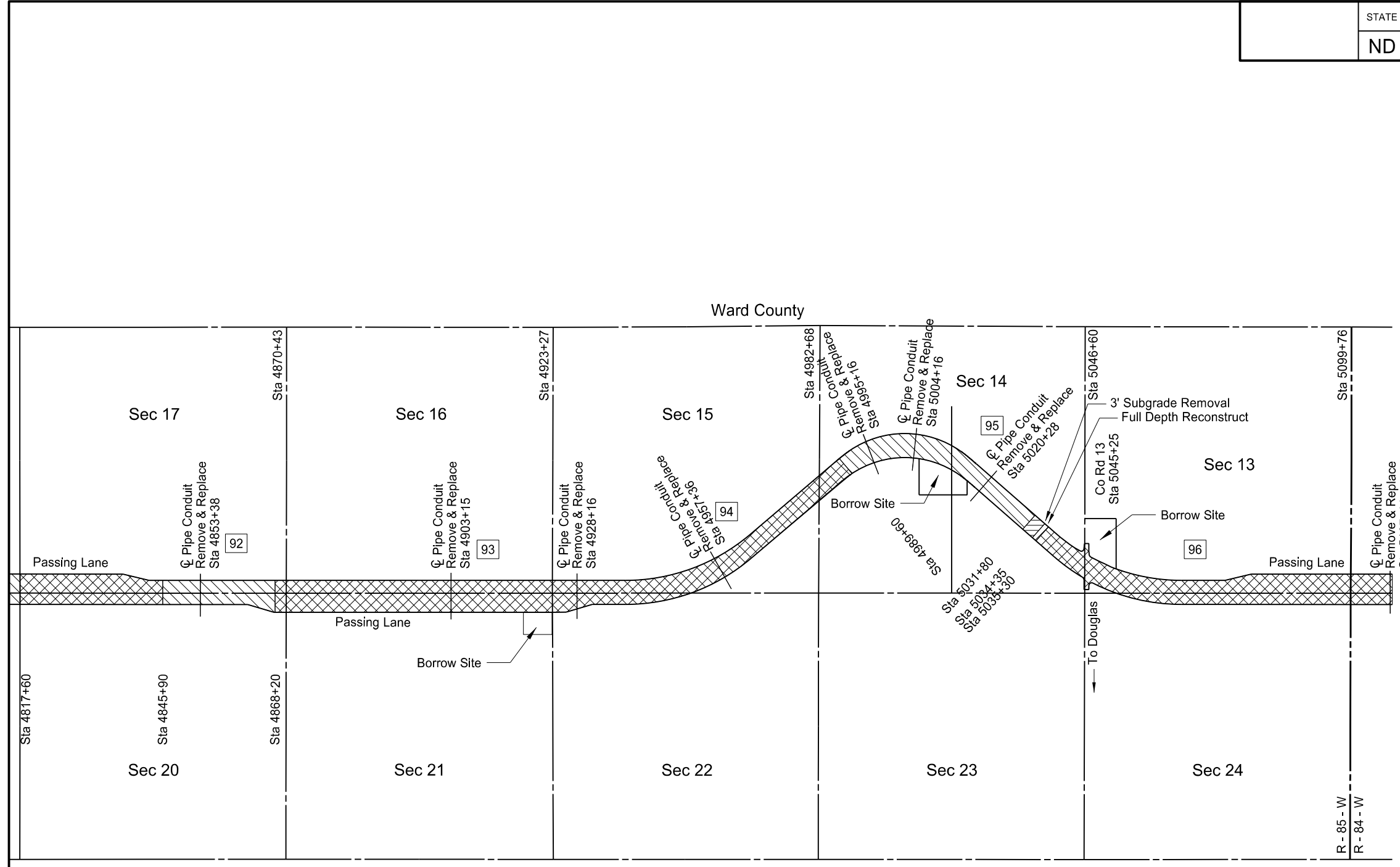
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purposes.

Scope of Work

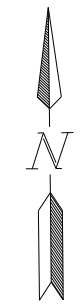
ND 23 - ND 28 to US 83

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	4	2

-  Reference Marker
-  Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base
-  3' Subgrade Removal, Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base
-  Mine and Blend, 6" Superpave FAA 45 on 18" Blended Base
-  Construct Grade Raise, Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base




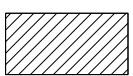
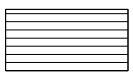
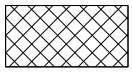

R - 85 - W
R - 84 - W
T - 152 - N

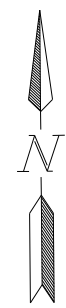
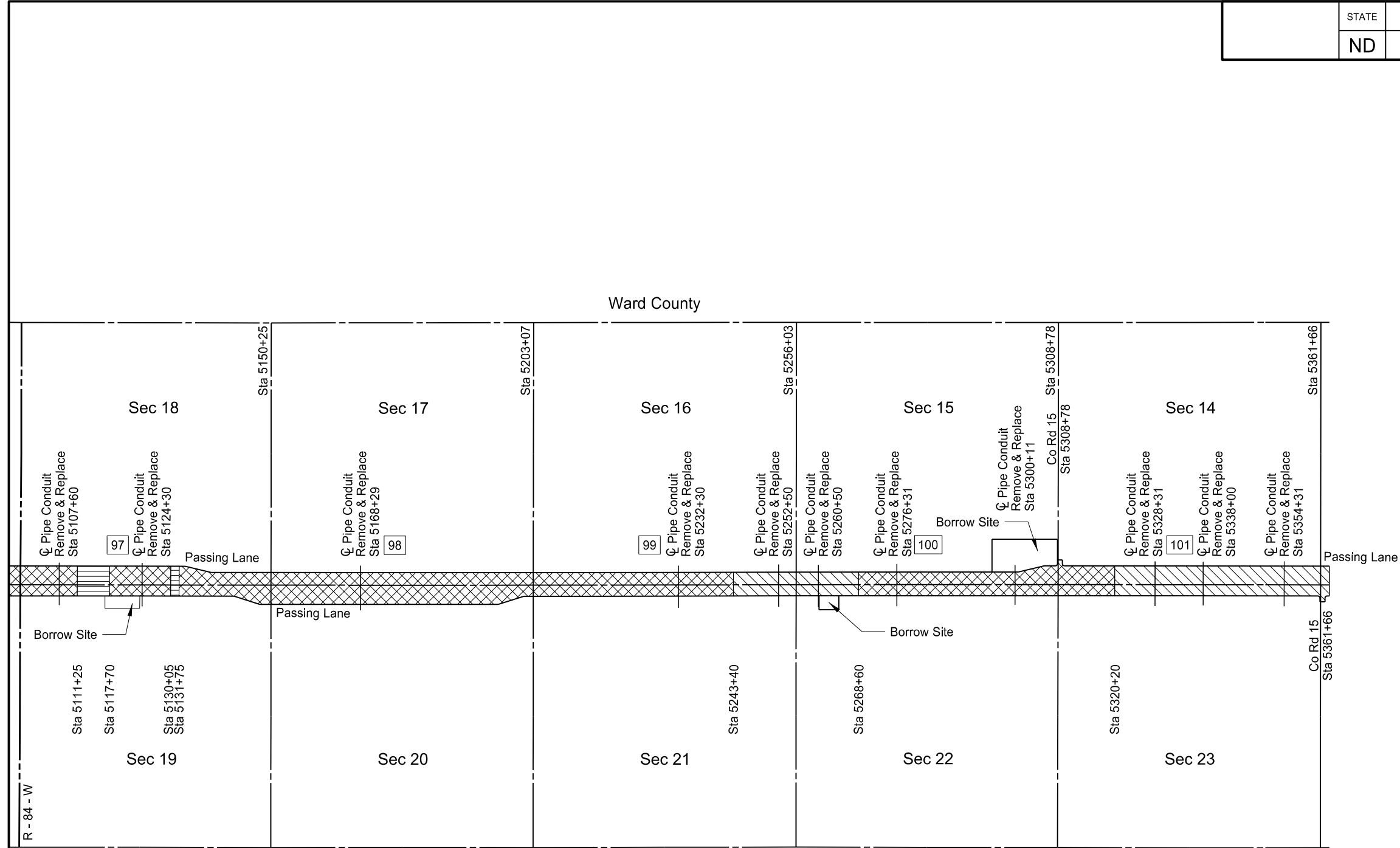


This document is preliminary and not for construction or implementation purposes.

Scope of Work
ND 23 - ND 28 to US 83

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	4	3

-  97 Reference Marker
-  Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base
-  3' Subgrade Removal, Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base
-  Mine and Blend, 6" Superpave FAA 45 on 18" Blended Base
-  Construct Grade Raise, Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base



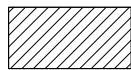
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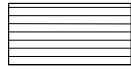
Scope of Work


ND 23 - ND 28 to US 83


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	4	4

102 Reference Marker

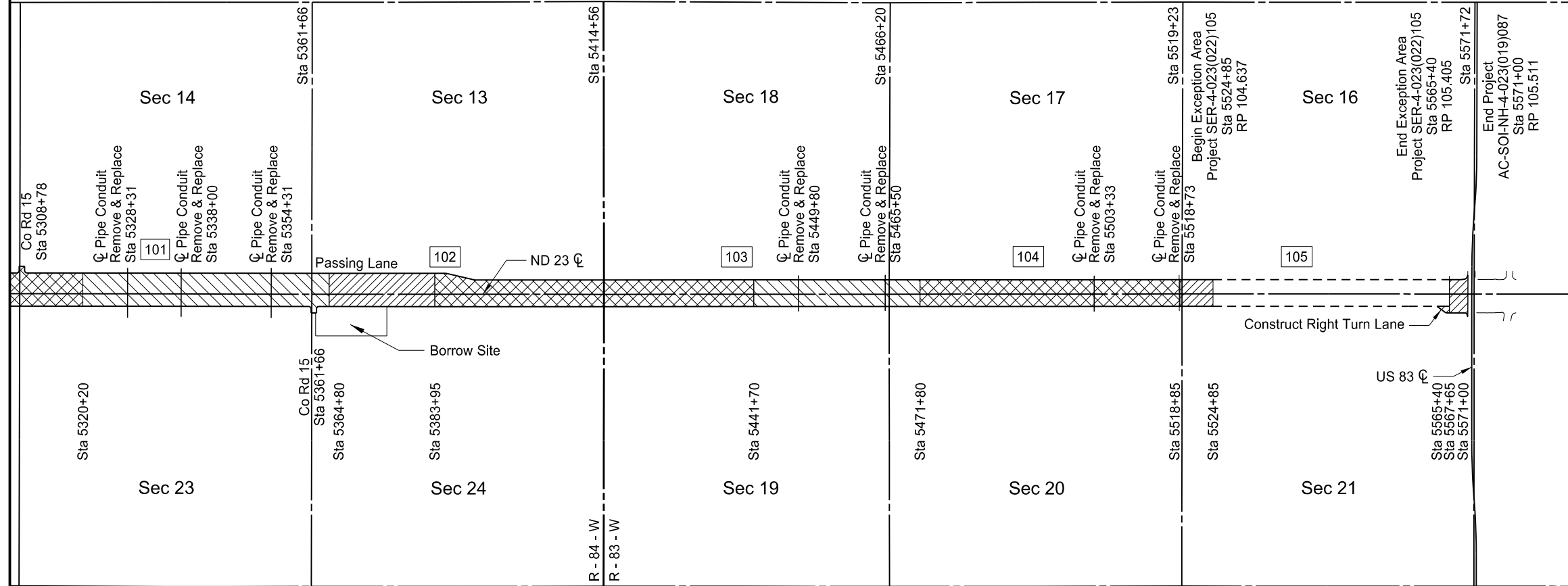
 Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base

 3' Subgrade Removal, Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base

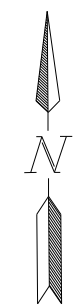
 Mine and Blend, 6" Superpave FAA 45 on 18" Blended Base

 Construct Grade Raise, Full Depth Reconstruction, 6" Superpave FAA 45 on 18" Salvaged Base

Ward County



T - 152 - N



This document is preliminary and not for construction or implementation purposes.

Scope of Work
ND 23 - ND 28 to US 83

ENVIRONMENTAL COMMITMENTS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	6	6

ENVIRONMENTAL COMMITMENTS: The North Dakota Department of Transportation and the Federal Highway Administration have made environmental commitments to various agencies and the public to secure approval of this project. The environmental commitments are as follows:

COMMITMENT NO. 1: Unavoidable impacts to wetlands will be mitigated onsite, adjacent to the project, or at a NDDOT approved mitigation site or bank. Approximately 0.00 natural/jurisdictional, 22.28 natural/non-jurisdictional, 0.00 artificial/jurisdictional, and 0.35 artificial/non-jurisdictional acres of wetlands will be impacted permanently, 5.01 acres of deep water impacts, and 4.05 acres will be impacted temporarily.

ACTION TAKEN/REQUIRED: All natural wetlands (natural/jurisdictional and natural/non-jurisdictional) regardless of size, as well as artificial/jurisdictional wetland greater than 0.10 acres require mitigation. All artificial/non-jurisdictional, deep water, and temporary impacts do not require mitigation. Therefore, 22.28 acres of wetlands will be mitigated through the creation of wetlands on or adjacent to the project area. Negotiations with land owners are ongoing for mitigation sites.

COMMITMENT NO. 2: Unavoidable impacts to the USFWS wetlands will be mitigated on site. Approximately 1.28 acres of wetlands will be impacted permanently and 0.02 acres of wetlands will be impacted temporarily.

ACTION TAKEN/REQUIRED: 1.28 acres of wetlands will be mitigated at the Vollrath 15/21 mitigation bank.

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	Impacts to Wetlands (acres)		Impacts to Deep Water		USFWS Wetland Impacts	
								Temp.	Perm.	Acres	Cu. Yds.	Temp.	Perm.
35	T152N R86W Section22	-101.669789 W 47.977853 N	PEMC	Basin	2.59	Natural	N/A	0.01	0.03	0.00	0	0.00	0.00
36	T152N R86W Section22	-101.661364 W 47.977723 N	PEMA	Basin	0.06	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
37	T152N R86W Section22	-101.660049 W 47.977054 N	PABF	Basin	5.01	Natural	N/A	0.00	0.02	0.00	0	0.00	0.00
38A	T152N R86W Section23	-101.653556 W 47.977731 N	PABF	Basin	4.87	Natural	N/A	0.05	0.56	0.60	5,878	0.00	0.58
38B	T152N R86W Section14	-101.653446 W 47.979309 N	PEMC	Basin	7.69	Natural	N/A	0.04	0.59	0.52	5,432	0.00	0.41
39	T152N R86W Section23	-101.641149 W 47.977957 N	PEMA	Basin	0.23	Natural	N/A	0.00	0.02	0.00	0	0.00	0.00
40A	T152N R86W Section24	-101.634589 W 47.977921 N	PABF	Basin	0.68	Natural	N/A	0.25	0.36	0.07	481	0.00	0.00
40B	T152N R86W Section14	-101.636785 W 47.978703 N	PABF	Basin	8.64	Natural	N/A	0.10	0.64	0.92	11,427	0.00	0.00
41	T152N R86W Section24	-101.626203 W 47.977791 N	PABF	Basin	4.06	Natural	N/A	0.00	0.15	0.00	0	0.00	0.00
42	T152N R86W Section24	-101.615745 W 47.977574 N	PEMC	Basin	4.06	Natural	N/A	0.00	0.19	0.11	219	0.00	0.00
43	T152N R85W Section19	-101.610222 W 47.977906 N	PEMC	Basin	0.67	Natural	N/A	0.00	0.13	0.00	0	0.00	0.00
44	T152N R85W Section18	-101.606069 W 47.978543 N	PEMC	Basin	0.91	Natural	N/A	0.10	0.21	0.00	0	0.00	0.00
45A	T152N R85W Section19	-101.598077 W 47.977763 N	PEM/ABF	Basin	5.62	Natural	N/A	0.05	0.87	0.10	654	0.00	0.00
45B	T152N R85W Section18	-101.597212 W 47.979064 N	PEMC	Basin	8.91	Natural	N/A	0.02	0.94	0.22	2,089	0.00	0.00
46	T152N R85W Section19	-101.595288 W 47.977893 N	PEMA	Basin	0.55	Natural	N/A	0.00	0.05	0.00	0	0.00	0.00

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	Impacts to Wetlands (acres)		Impacts to Deep Water		USFWS Wetland Impacts	
								Temp.	Perm.	Acres	Cu. Yds.	Temp.	Perm.
47	T152N R85W Section20	-101.587102 W 47.977996 N	PEMC	Basin	0.64	Natural	N/A	0.00	0.11	0.00	0	0.00	0.00
48A	T152N R85W Section20	-101.583665 W 47.977908 N	PEMA	Basin	0.93	Natural	N/A	0.03	0.04	0.00	0	0.00	0.00
48B	T152N R85W Section17	-101.583390 W 47.978874 N	PEMC	Basin	1.35	Natural	N/A	0.00	0.06	0.00	0	0.00	0.00
49A	T152N R85W Section20	-101.579272 W 47.977533 N	PABF	Basin	5.52	Natural	N/A	0.02	0.71	0.12	668	0.00	0.00
49B	T152N R85W Section17	-101.579137 W 47.978952 N	PABF	Basin	4.73	Natural	N/A	0.02	0.66	0.16	1,021	0.00	0.00
50	T152N R85W Section20	-101.574851 W 47.977814 N	PEMC	Basin	1.34	Natural	N/A	0.00	0.12	0.00	0	0.00	0.00
51	T152N R85W Section21	-101.570727 W 47.977675 N	PEMC	Basin	1.21	Natural	N/A	0.07	0.06	0.00	0	0.00	0.00
52	T152N R85W Section21	-101.558838 W 47.977755 N	PEM/ABF	Basin	2.65	Natural	N/A	0.05	0.18	0.00	0	0.00	0.00
53	T152N R85W Section21	-101.554347 W 47.977980 N	PEMC	Basin	0.47	Natural	N/A	0.02	0.08	0.00	0	0.00	0.00
54	T152N R85W Section22	-101.547709 W 47.978116 N	PEMC	Basin	0.89	Natural	N/A	0.03	0.36	0.00	0	0.00	0.00
55	T152N R85W Section22	-101.544250 W 47.978012 N	PEMC	Basin	0.07	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
56	T152N R85W Section15	-101.541042 W 47.978458 N	PEMCx	Basin	0.10	Natural	N/A	0.00	0.01	0.00	0	0.00	0.00
57	T152N R85W Section22	-101.540983 W 47.978279 N	PEMA	Basin	0.09	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
58	T152N R85W Section15	-101.533476 W 47.981259 N	PABF	Basin	5.00	Natural	N/A	0.09	0.09	0.00	0	0.00	0.00
59	T152N R85W Section14	-101.517901 W 47.986784 N	L2ABG	Basin	351.27	Natural	N/A	0.22	2.52	0.00	0	0.00	0.00

ENVIRONMENTAL COMMITMENTS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	6	7

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	Impacts to Wetlands (acres)		Impacts to Deep Water		USFWS Wetland Impacts	
								Temp.	Perm.	Acres	Cu. Yds.	Temp.	Perm.
60	T152N R85W Section14	-101.510734 W 47.980901 N	PEMA	Basin	5.84	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
61	T152N R85W Section14	-101.508993 W 47.980048 N	PEMC	Basin	1.01	Natural	N/A	0.01	0.47	0.00	0	0.00	0.00
62	T152N R85W Section24	-101.499615 W 47.978314 N	PEMC	Basin	1.16	Natural	N/A	0.00	0.27	0.00	0	0.00	0.00
63A	T152N R85W Section24	-101.496011 W 47.978302 N	PEMA	Drainage Ditch	0.33	Artificial	N/A	0.20	0.07	0.00	0	0.00	0.00
63B	T152N R85W Section13	-101.498447 W 47.979156 N	PABF	Basin	9.68	Natural	N/A	0.02	0.37	0.00	1	0.00	0.00
64	T152N R85W Section24	-101.494281 W 47.978319 N	PEMC	Drainage Ditch	0.02	Artificial	N/A	0.00	0.00	0.00	0	0.00	0.00
65	T152N R85W Section24	-101.493329 W 47.978122 N	PEMC	Basin	1.00	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
66	T152N R85W Section24	-101.491847 W 47.978161 N	PEMA	Basin	0.11	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
67	T152N R85W Section24	-101.491128 W 47.978333 N	PEMA	Drainage Ditch	0.27	Artificial	N/A	0.15	0.09	0.00	0	0.00	0.00
68	T152N R85W Section24	-101.490188 W 47.978152 N	PEMC	Basin	0.41	Natural	N/A	0.06	0.00	0.00	0	0.00	0.00
69	T152N R84W Section19	-101.485036 W 47.977948 N	PEMC	Basin	0.71	Natural	N/A	0.01	0.01	0.00	0	0.00	0.00
70	T152N R84W Section19	-101.484539 W 47.978261 N	PEMA	Basin	0.06	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
71	T152N R84W Section19	-101.482152 W 47.978132 N	PEMC	Basin	2.27	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
72	T152N R84W Section18	-101.475371 W 47.978787 N	PEMC	Basin	0.94	Natural	N/A	0.07	0.14	0.00	0	0.00	0.00
73	T152N R84W Section19	-101.472194 W 47.977622 N	PEMC	Basin	3.11	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	Impacts to Wetlands (acres)		Impacts to Deep Water		USFWS Wetland Impacts	
								Temp.	Perm.	Acres	Cu. Yds.	Temp.	Perm.
74	T152N R84W Section20	-101.459927 W 47.978112 N	PEMC	Basin	0.12	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
75	T152N R84W Section20	-101.459116 W 47.977816 N	PEMC	Basin	0.69	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
76	T152N R84W Section20	-101.458533 W 47.978261 N	PEMA	Basin	0.05	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
77	T152N R84W Section20	-101.456381 W 47.977360 N	PEMC	Basin	4.35	Natural	N/A	0.00	0.15	0.03	73	0.00	0.00
78	T152N R84W Section20	-101.453880 W 47.978266 N	PEMC	Basin	4.14	Natural	N/A	0.04	0.10	0.00	0	0.00	0.00
79	T152N R84W Section20	-101.452554 W 47.978007 N	PEMC	Basin	0.80	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
80	T152N R84W Section20	-101.450424 W 47.978244 N	PEMC	Basin	0.33	Natural	N/A	0.00	0.03	0.00	0	0.00	0.00
81	T152N R84W Section20	-101.449142 W 47.978214 N	PEMC	Basin	0.21	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
82	T152N R84W Section20	-101.448090 W 47.978135 N	PEMC	Basin	1.27	Natural	N/A	0.02	0.23	0.01	23	0.00	0.00
83	T152N R84W Section20	-101.445631 W 47.977969 N	PEMC	Basin	0.84	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
84	T152N R84W Section21	-101.438549 W 47.977192 N	PEMC	Basin	25.16	Natural	N/A	0.07	0.17	0.08	113	0.00	0.13
85	T152N R84W Section21	-101.440548 W 47.978234 N	PEMC	Basin	0.50	Natural	N/A	0.00	0.02	0.00	0	0.00	0.00
86	T152N R84W Section21	-101.432128 W 47.978267 N	PEMC	Basin	0.45	Natural	N/A	0.06	0.03	0.00	0	0.00	0.00
87	T152N R84W Section21	-101.426551 W 47.978380 N	PEMA	Basin	0.10	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
88A	T152N R84W Section21	-101.423997 W 47.978247 N	PEMC	Basin	2.18	Natural	N/A	0.01	0.51	0.24	2,517	0.00	0.00

ENVIRONMENTAL COMMITMENTS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	6	8

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	Impacts to Wetlands (acres)		Impacts to Deep Water		USFWS Wetland Impacts	
								Temp.	Perm.	Acres	Cu. Yds.	Temp.	Perm.
88B	T152N R84W Section16	-101.425289 W 47.979258 N	PEM/ABF	Basin	4.67	Natural	N/A	0.03	0.82	0.03	655	0.00	0.00
89A	T152N R84W Section22	-101.421319 W 47.978151 N	PEMC	Basin	12.28	Natural	N/A	0.03	0.53	0.00	0	0.00	0.00
89B	T152N R84W Section15	-101.420229 W 47.979088 N	PEMC	Basin	1.60	Natural	N/A	0.03	0.34	0.00	0	0.00	0.00
90	T152N R84W Section22	-101.414339 W 47.978347 N	PEMC	Basin	0.69	Natural	N/A	0.04	0.09	0.00	0	0.00	0.00
91	T152N R84W Section15	-101.408141 W 47.979352 N	PABF	Basin	29.20	Natural	N/A	0.32	1.44	0.13	188	0.00	0.00
92	T152N R84W Section23	-101.400453 W 47.978233 N	PEMA	Basin	0.25	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
93	T152N R84W Section23	-101.399537 W 47.978272 N	PEMC	Basin	0.49	Natural	N/A	0.00	0.02	0.00	0	0.00	0.00
94	T152N R84W Section23	-101.396165 W 47.977763 N	PEMC	Basin	2.12	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
95	T152N R84W Section23	-101.392771 W 47.978471 N	PEMC	Basin	4.46	Natural	N/A	0.08	0.39	0.00	0	0.00	0.16
96	T152N R84W Section23	-101.390260 W 47.978570 N	PEMA	Drainage Ditch	0.05	Artificial	N/A	0.00	0.05	0.00	0	0.00	0.00
97A	T152N R84W Section23	-101.388309 W 47.977546 N	PABF	Basin	7.71	Natural	N/A	0.05	0.32	0.34	2,360	0.00	0.00
97B	T152N R84W Section14	-101.388475 W 47.979020 N	PABF	Basin	1.45	Natural	N/A	0.05	0.25	0.38	3,422	0.00	0.00
98	T152N R84W Section23	-101.385852 W 47.978580 N	PEMA	Drainage Ditch	0.07	Artificial	N/A	0.04	0.03	0.00	0	0.00	0.00
99	T152N R84W Section23	-101.381392 W 47.978180 N	PEMC	Basin	16.76	Natural	N/A	0.08	0.71	0.29	1,565	0.00	0.00
100A	T152N R84W Section24	-101.369871 W 47.978079 N	PEM/ABF	Basin	0.78	Natural	N/A	0.01	0.00	0.00	0	0.00	0.00

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	Impacts to Wetlands (acres)		Impacts to Deep Water		USFWS Wetland Impacts	
								Temp.	Perm.	Acres	Cu. Yds.	Temp.	Perm.
100B	T152N R84W Section13	-101.370552 W 47.979242 N	PEMC	Basin	16.81	Natural	N/A	0.01	0.00	0.00	0	0.00	0.00
101	T152N R84W Section24	-101.367142 W 47.978606 N	PEMA	Basin	0.04	Natural	N/A	0.03	0.00	0.00	0	0.00	0.00
102	T152N R84W Section24	-101.365500 W 47.978432 N	PEM/ABF	Basin	1.79	Natural	N/A	0.08	0.26	0.00	0	0.00	0.00
103	T152N R84W Section24	-101.358845 W 47.978417 N	PABF	Basin	10.68	Natural	N/A	0.10	0.48	0.02	18	0.00	0.00
104	T152N R83W Section19	-101.350418 W 47.978514 N	PEM/ABF	Basin	3.38	Natural	N/A	0.08	0.06	0.00	0	0.00	0.00
105	T152N R83W Section19	-101.347956 W 47.978600 N	PEMA	Basin	0.05	Natural	N/A	0.05	0.03	0.00	0	0.00	0.00
106	T152N R83W Section19	-101.346136 W 47.978295 N	PEMA	Basin	0.34	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
107	T152N R83W Section19	-101.344266 W 47.978274 N	PEMF	Basin	2.89	Natural	N/A	0.03	0.20	0.00	0	0.00	0.00
108A	T152N R83W Section19	-101.338763 W 47.977966 N	PEMC	Basin	10.50	Natural	N/A	0.46	1.40	0.39	2,566	0.00	0.00
108B	T152N R83W Section18	-101.336761 W 47.979361 N	PABF	Basin	3.01	Natural	N/A	0.08	0.22	0.23	1,758	0.00	0.00
109	T152N R83W Section20	-101.336199 W 47.978465 N	PEMC	Basin	0.46	Natural	N/A	0.00	0.16	0.02	81	0.00	0.00
110	T152N R83W Section20	-101.332911 W 47.978319 N	PEMA	Basin	0.24	Natural	N/A	0.00	0.03	0.00	0	0.00	0.00
111	T152N R83W Section20	-101.324256 W 47.978137 N	PEM/ABF	Basin	2.07	Natural	N/A	0.02	0.01	0.00	0	0.00	0.00
112A	T152N R83W Section20	-101.321273 W 47.978592 N	PEMA	Basin	0.12	Natural	N/A	0.04	0.03	0.00	0	0.00	0.00
112B	T152N R83W Section17	-101.320435 W 47.979355 N	PEMC	Basin	2.27	Natural	N/A	0.03	0.09	0.00	0	0.00	0.00

ENVIRONMENTAL COMMITMENTS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	6	9

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	Impacts to Wetlands (acres)		Impacts to Deep Water		USFWS Wetland Impacts	
								Temp.	Perm.	Acres	Cu. Yds.	Temp.	Perm.
113A	T152N R83W Section16	-101.308736922 47.9792249947	PEMC	Basin	6.52	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
113B	T152N R83W Section16	-101.302510807 47.9802061096	PEMC	Basin	21.85	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
115	T152N R83W Section16	-101.312880 W 47.979450 N	PEM/ABF	Basin	1.56	Natural	N/A	0.00	0.05	0.00	0	0.00	0.00
116	T152N R83W Section17	-101.316715 W 47.979334 N	PEMF	Basin	0.63	Natural	N/A	0.00	0.09	0.00	0	0.00	0.00
118	T152N R83W Section17	-101.327566 W 47.979397 N	PEMC	Basin	0.40	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
119	T152N R83W Section17	-101.329978 W 47.979339 N	PEMC	Basin	3.07	Natural	N/A	0.00	0.32	0.02	7	0.00	0.00
120	T152N R83W Section17	-101.334437 W 47.979538 N	PEMC	Basin	0.87	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
122	T152N R83W Section18	-101.343545 W 47.979454 N	PEMC	Basin	0.63	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
123	T152N R83W Section18	-101.347713 W 47.979045 N	PEMA	Basin	0.04	Natural	N/A	0.02	0.00	0.00	0	0.00	0.00
126	T152N R84W Section14	-101.390610 W 47.978838 N	PEMA	Drainage Ditch	0.04	Artificial	N/A	0.00	0.04	0.00	0	0.00	0.00
127	T152N R84W Section14	-101.391254 W 47.978838 N	PEMA	Drainage Ditch	0.03	Artificial	N/A	0.00	0.03	0.00	0	0.00	0.00
128	T152N R84W Section14	-101.400467 W 47.978984 N	PEMC	Basin	0.24	Natural	N/A	0.00	0.04	0.00	0	0.00	0.00
129	T152N R84W Section15	-101.401499 W 47.978968 N	PEM/ABF	Basin	0.57	Natural	N/A	0.05	0.16	0.00	0	0.00	0.00
130	T152N R84W Section15	-101.410978 W 47.978887 N	PEMA	Basin	0.10	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
131	T152N R84W Section15	-101.412275 W 47.979123 N	PEMA	Basin	0.35	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
134	T152N R84W Section16	-101.432552 W 47.979307 N	PEMC	Basin	1.02	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00

Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	Impacts to Wetlands (acres)		Impacts to Deep Water		USFWS Wetland Impacts	
								Temp.	Perm.	Acres	Cu. Yds.	Temp.	Perm.
135	T152N R84W Section17	-101.443859 W 47.979113 N	PABF	Basin	0.86	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
136	T152N R84W Section17	-101.447050 W 47.979133 N	PEMC	Basin	3.20	Natural	N/A	0.02	0.02	0.00	0	0.00	0.00
137	T152N R84W Section17	-101.456450 W 47.978647 N	PEMA	Basin	0.07	Natural	N/A	0.04	0.02	0.00	0	0.00	0.00
138	T152N R84W Section17	-101.458747 W 47.979140 N	PEMC	Basin	0.06	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
139	T152N R84W Section17	-101.459420 W 47.978826 N	PEMC	Basin	0.27	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
140	T152N R84W Section18	-101.473233 W 47.978758 N	PEMC	Basin	0.48	Natural	N/A	0.00	0.08	0.00	0	0.00	0.00
141	T152N R84W Section18	-101.477273 W 47.978784 N	PEMC	Basin	0.33	Natural	N/A	0.04	0.03	0.00	0	0.00	0.00
142	T152N R84W Section18	-101.483390 W 47.979200 N	PEMC	Basin	1.14	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
143	T152N R85W Section13	-101.486065 W 47.979069 N	PEMC	Basin	1.59	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
144	T152N R85W Section13	-101.488574 W 47.979016 N	PEM/ABF	Basin	0.80	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
145	T152N R85W Section13	-101.490354 W 47.979056 N	PEMC	Basin	0.29	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
146	T152N R85W Section13	-101.492059 W 47.979010 N	PEMA	Basin	0.18	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
147	T152N R85W Section13	-101.493743 W 47.979120 N	PEM/ABF	Basin	0.99	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
148	T152N R85W Section13	-101.495146 W 47.978799 N	PEMC	Basin	0.77	Natural	N/A	0.00	0.08	0.00	0	0.00	0.00
150	T152N R85W Section13	-101.504284 W 47.979098 N	PEMA	Drainage Ditch	0.46	Artificial	N/A	0.09	0.04	0.00	0	0.00	0.00
151	T152N R85W Section14	-101.525283 W 47.986457 N	L2ABG	Basin	65.10	Natural	N/A	0.05	0.81	0.00	0	0.00	0.00

ENVIRONMENTAL COMMITMENTS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	6	10







Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	Impacts to Wetlands (acres)		Impacts to Deep Water		USFWS Wetland Impacts	
								Temp.	Perm.	Acres	Cu. Yds.	Temp.	Perm.
152	T152N R85W Section15	-101.537629 W 47.979966 N	PEMC	Basin	0.21	Natural	N/A	0.01	0.00	0.00	0	0.00	0.00
153	T152N R85W Section15	-101.539786 W 47.979267 N	PEMA	Basin	0.43	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
154	T152N R85W Section15	-101.541922 W 47.978742 N	PEMA	Drainage Ditch	0.25	Artificial	N/A	0.00	0.00	0.00	0	0.00	0.00
155	T152N R85W Section15	-101.546083 W 47.978561 N	PEMA	Basin	0.34	Natural	N/A	0.01	0.01	0.00	0	0.00	0.00
156	T152N R85W Section15	-101.549460 W 47.979055 N	PEMC	Basin	1.00	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
157	T152N R85W Section16	-101.551752 W 47.978715 N	PEMA	Basin	0.29	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
158	T152N R85W Section16	-101.565467 W 47.978566 N	PEMA	Basin	0.31	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
161	T152N R85W Section17	-101.586255 W 47.978609 N	PEMC	Basin	1.13	Natural	N/A	0.00	0.19	0.00	0	0.00	0.00
162	T152N R85W Section17	-101.593149 W 47.978912 N	PEMC	Basin	0.93	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
164	T152N R85W Section18	-101.613396 W 47.978462 N	PEMC	Basin	0.28	Natural	N/A	0.00	0.05	0.00	0	0.00	0.00
165	T152N R86W Section13	-101.618288 W 47.978646 N	PEMC	Basin	1.17	Natural	N/A	0.00	0.07	0.00	0	0.00	0.00
166	T152N R86W Section13	-101.622316 W 47.978713 N	PEMA	Basin	0.24	Natural	N/A	0.02	0.01	0.00	0	0.00	0.00
167	T152N R86W Section13	-101.626333 W 47.978358 N	PEMA	Basin	0.07	Natural	N/A	0.01	0.01	0.00	0	0.00	0.00
168	T152N R86W Section13	-101.628439 W 47.979331 N	PEMFd	Basin	14.68	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
169	T152N R86W Section13	-101.632767 W 47.978290 N	PEMA	Basin	0.28	Natural	N/A	0.00	0.07	0.00	0	0.00	0.00

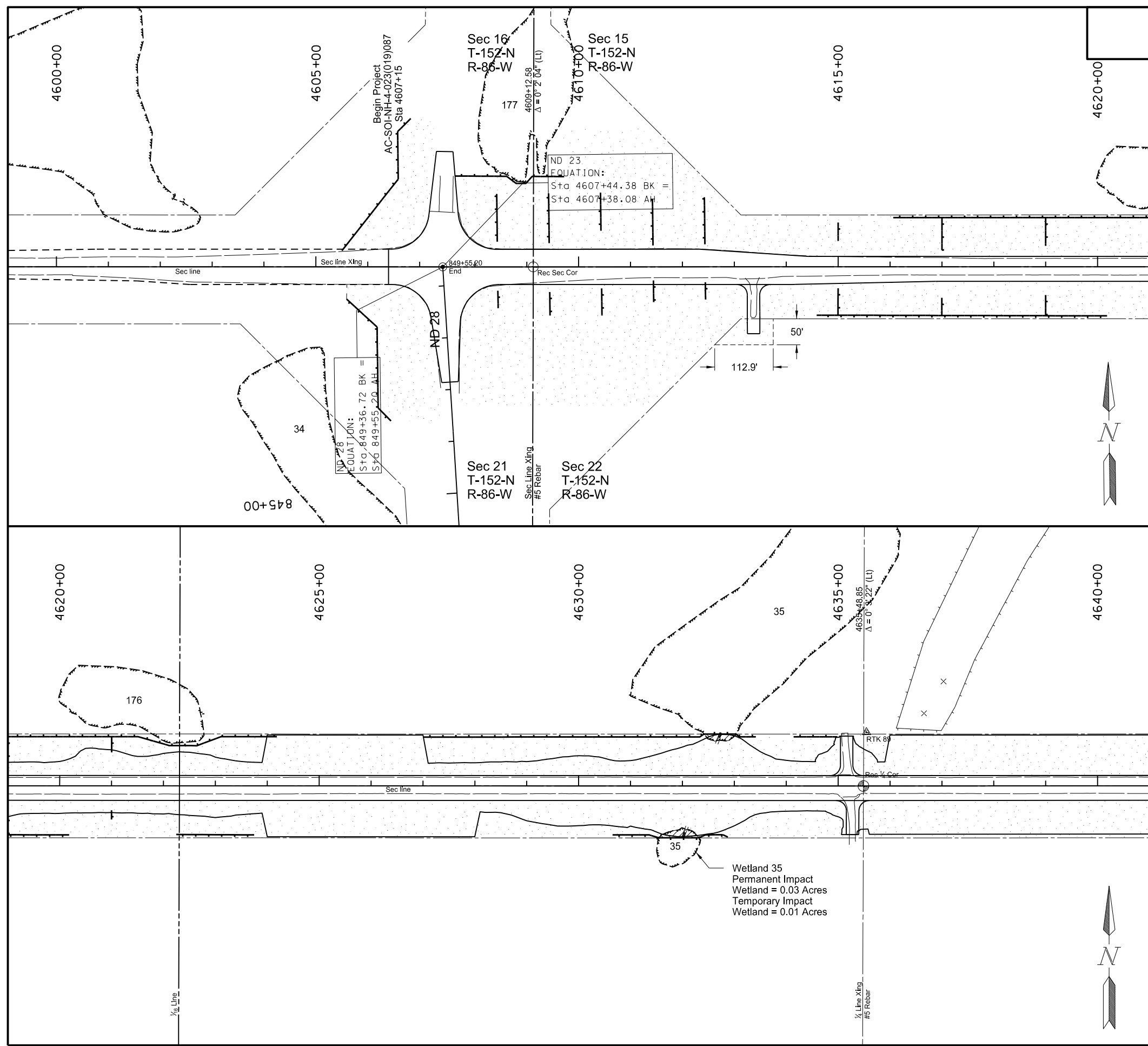
Wetland Number	Location	LONG/LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands*	Impacts to Wetlands (acres)		Impacts to Deep Water		USFWS Wetland Impacts	
								Temp.	Perm.	Acres	Cu. Yds.	Temp.	Perm.
171	T152N R86W Section14	-101.644025 W 47.979885 N	PEMF	Basin	11.05	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
172	T152N R86W Section14	-101.647826 W 47.979668 N	PABF	Basin	4.21	Natural	N/A	0.00	0.00	0.00	0	0.02	0.00
174	T152N R86W Section14	-101.655163 W 47.978464 N	PEMC	Basin	0.31	Natural	N/A	0.00	0.04	0.00	0	0.00	0.00
175	T152N R86W Section15	-101.659259 W 47.979008 N	PABF	Basin	3.27	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
176	T152N R86W Section15	-101.674071 W 47.978607 N	PEMC	Basin	0.65	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
177	T152N R86W Section15	-101.678967 W 47.979409 N	PEMC	Basin	1.70	Natural	N/A	0.00	0.00	0.00	0	0.00	0.00
Totals					793.45			4.02	22.64	5.01	43,216	0.02	1.28

*A wetland Jurisdictional Determination was issued by the USACE on 11/01/2011; NWO-2011-2036-BIS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	75	1

Item	Description	Quantity	Unit
708-1430	Fiber Roll 12 In		
	Sta 4605+00 - Lt to 4636+00 Lt	2,694	LF
	Sta 4605+00 - Rt to 4636+00 Rt	1,556	LF
708-2240	Seeding - Type B CL II		
	Sta 4605+00 - Lt to 4640+00 Lt Sta 4605+00 - Rt to 4640+00 Rt	7.27 7.54	Acre Acre
708-2260	Seeding - Type B CL IV		
	Sta 4605+00 - Lt to 4640+00 Lt Sta 4605+00 - Rt to 4640+00 Rt	7.27 7.54	Acre Acre
708-2280	Seeding - Type B CL V		
	Sta 4605+00 - Lt to 4640+00 Lt Sta 4605+00 - Rt to 4640+00 Rt	0.01 0.01	Acre Acre

-  SEEDING-TYPE B CL II
-  SEEDING-TYPE B CL IV
-  MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  FIBER ROLLS 12IN

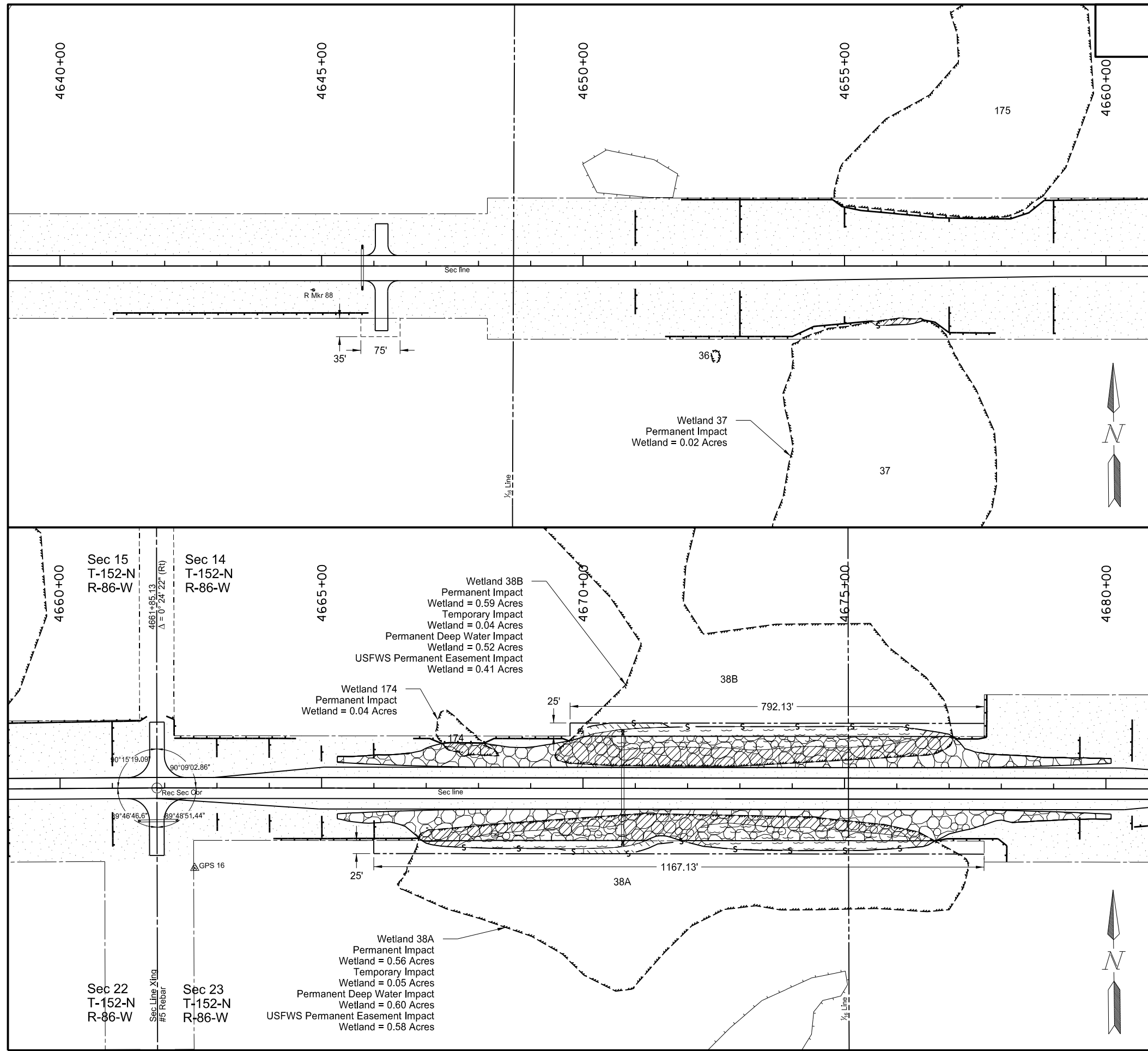


Wetland 35
 Permanent Impact
 Wetland = 0.03 Acres
 Temporary Impact
 Wetland = 0.01 Acres






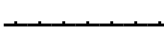
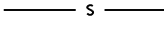
This document
 is preliminary
 and not for
 construction or
 implementation
 purposes.

Wetlands, Erosion Control,
 and Seeding
 ND 23 - ND 28 to US 83

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	75	2



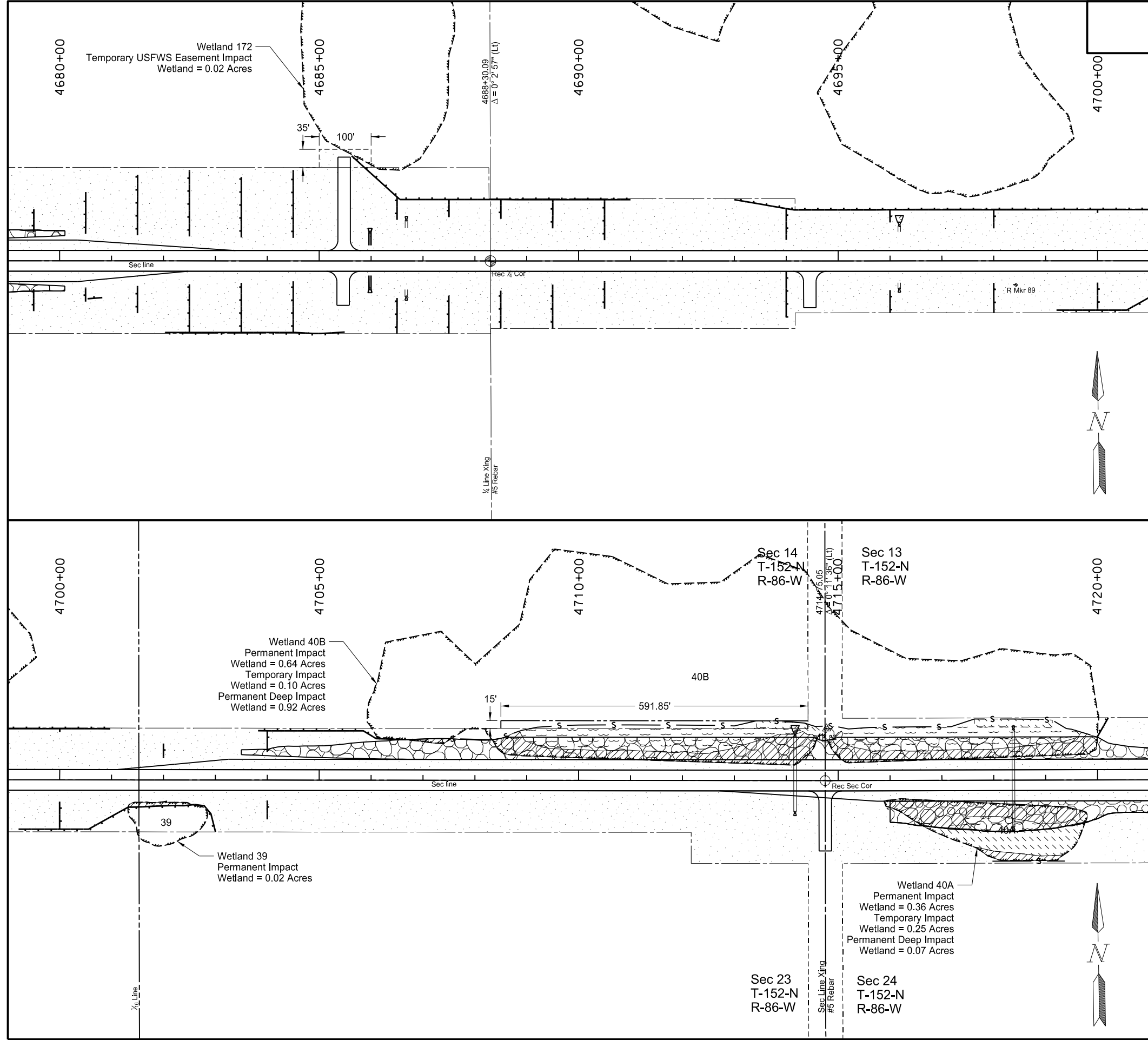
Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock Sta 4665+00 - Lt to 4680+00 Lt Sta 4665+00 - Rt to 4680+00 Rt	7,675 8,299	Ton Ton
708-1375	Flotation Silt Curtain Sta 4669+00 - Lt to 4678+00 Lt Sta 4654+00 - Rt to 4678+00 Rt	749 1,108	LF LF
708-1430	Fiber Roll 12 In Sta 4651+00 - Lt to 4680+00 Lt Sta 4640+00 - Rt to 4680+00 Rt	2,271 2,027	LF LF
708-2240	Seeding - Type B CL II Sta 4640+00 - Lt to 4680+00 Lt Sta 4640+00 - Rt to 4680+00 Rt	6.71 6.37	Acre Acre
708-2260	Seeding - Type B CL IV Sta 4640+00 - Lt to 4680+00 Lt Sta 4640+00 - Rt to 4680+00 Rt	6.71 6.37	Acre Acre
708-2280	Seeding - Type B CL V Sta 4640+00 - Lt to 4680+00 Lt Sta 4640+00 - Rt to 4680+00 Rt	0.04 0.05	Acre Acre
709-0600	Geotextile Fabric - Type RR Sta 4665+00 - Lt to 4680+00 Lt (12' Width) Sta 4665+00 - Rt to 4680+00 Rt (12' Width)	7,200 7,768	SY SY

-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  Permanent Deep Water Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN







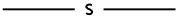
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Wetlands, Erosion Control,
and Seeding
ND 23 - ND 28 to US 83

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	75	3



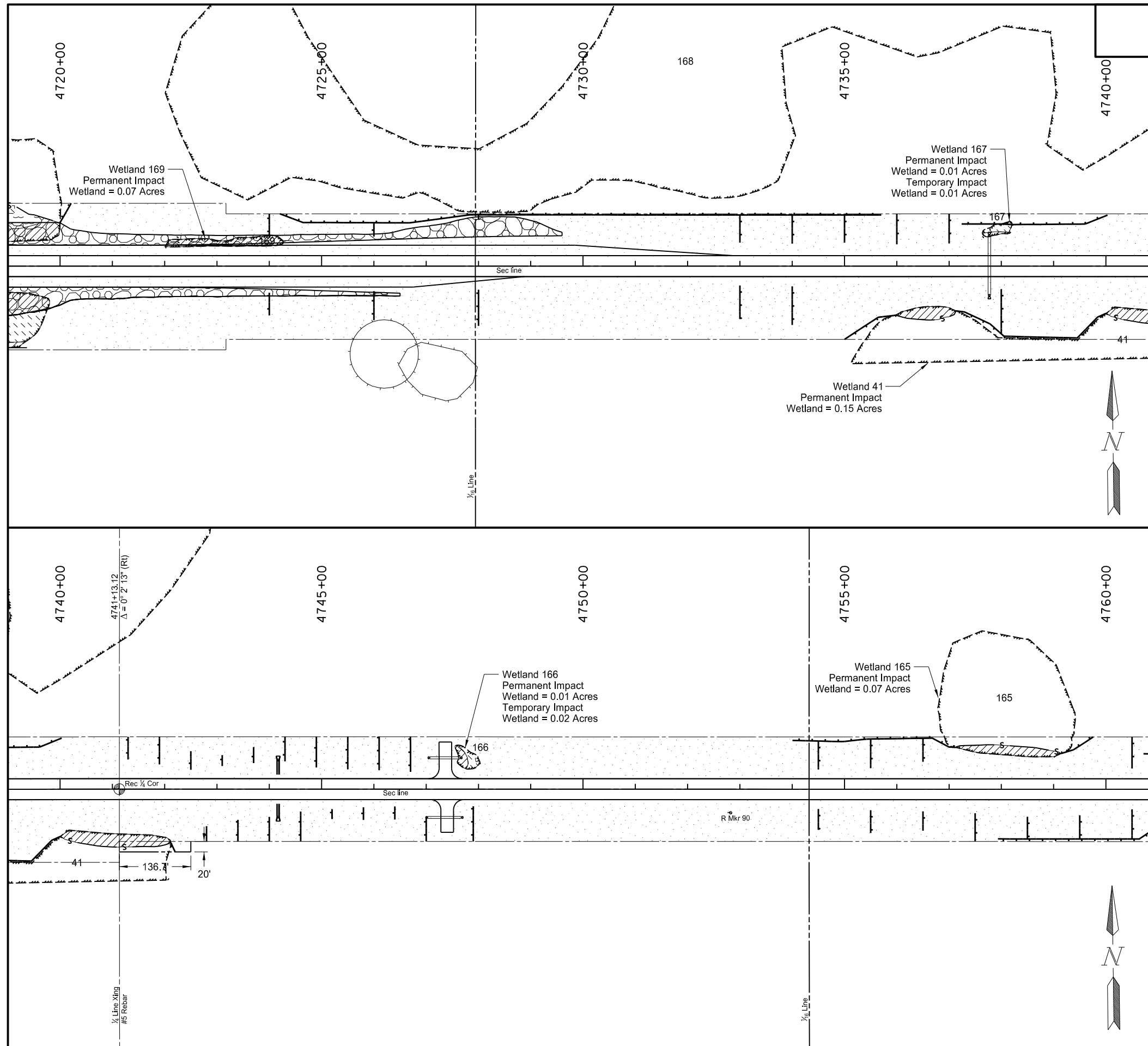
Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock Sta 4703+00 - Lt to 4720+00 Lt Sta 4716+00 - Rt to 4720+00 Rt	8,338 2,665	Ton Ton
708-1375	Flotation Silt Curtain Sta 4706+00 - Lt to 4720+00 Lt Sta 4717+00 - Rt to 4720+00 Rt	1,349 140	LF LF
708-1430	Fiber Roll 12 In Sta 4680+00 - Lt to 4720+00 Lt Sta 4680+00 - Rt to 4720+00 Rt	2,673 1,800	LF LF
708-2240	Seeding - Type B CL II Sta 4680+00 - Lt to 4720+00 Lt Sta 4680+00 - Rt to 4720+00 Rt	6.53 8.31	Acre Acre
708-2260	Seeding - Type B CL IV Sta 4680+00 - Lt to 4720+00 Lt Sta 4680+00 - Rt to 4720+00 Rt	6.53 8.31	Acre Acre
708-2280	Seeding - Type B CL V Sta 4680+00 - Lt to 4720+00 Lt Sta 4680+00 - Rt to 4720+00 Rt	0.10 0.25	Acre Acre
709-0600	Geotextile Fabric - Type RR Sta 4703+00 - Lt to 4720+00 Lt (12' Width) Sta 4716+00 - Rt to 4720+00 Rt (12' Width)	7,005 2,288	SY SY

-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  Permanent Deep Water Impact
-  FIBER ROLLS 12 IN
-  FLOTATION SILT CURTAIN







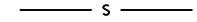
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Wetlands, Erosion Control,
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ND 23 - ND 28 to US 83

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	75	4

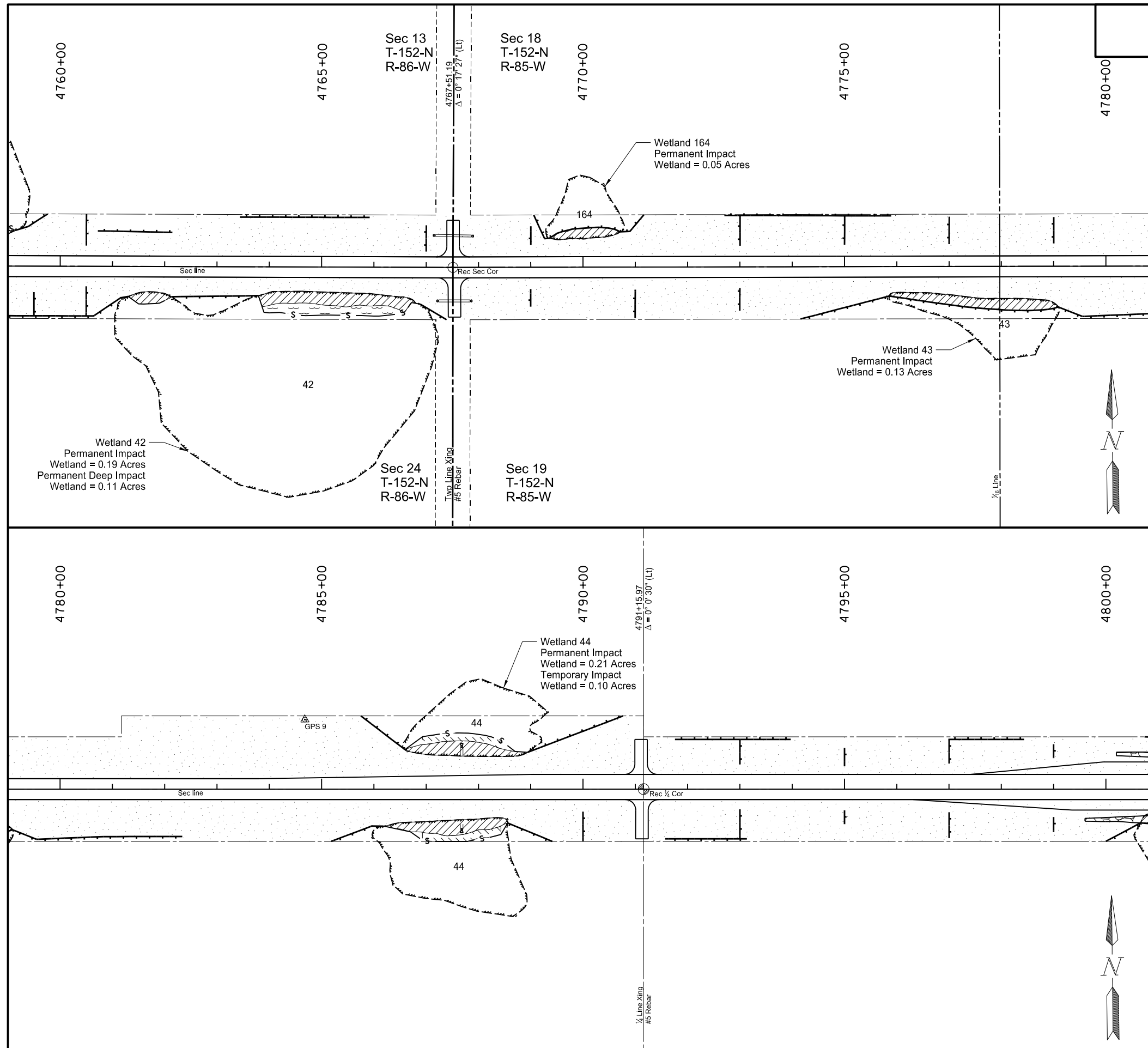


Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock		
	Sta 4720+00 - Lt to 4730+00 Lt	2,121	Ton
	Sta 4720+00 - Rt to 4725+50 Rt	929	Ton
708-1375	Flotation Silt Curtain		
	Sta 4720+00 - Lt to 4760+00 Lt	205	LF
	Sta 4735+00 - Rt to 4743+00 Rt	338	LF
708-1430	Fiber Roll 12 In		
	Sta 4720+00 - Lt to 4760+00 Lt	2,859	LF
	Sta 4720+00 - Rt to 4760+00 Rt	1,666	LF
708-2240	Seeding - Type B CL II		
	Sta 4720+00 - Lt to 4760+00 Lt	6.64	Acre
	Sta 4720+00 - Rt to 4760+00 Rt	8.61	Acre
708-2260	Seeding - Type B CL IV		
	Sta 4720+00 - Lt to 4760+00 Lt	6.64	Acre
	Sta 4720+00 - Rt to 4760+00 Rt	8.61	Acre
708-2280	Seeding - Type B CL V		
	Sta 4720+00 - Lt to 4760+00 Lt	0.03	Acre
709-0600	Geotextile Fabric - Type RR		
	Sta 4720+00 - Lt to 4730+00 Lt (12' Width)	2,264	SY
	Sta 4720+00 - Rt to 4725+50 Rt (12' Width)	1,097	SY








-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  Permanent Deep Water Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN

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ND 23 - ND 28 to US 83

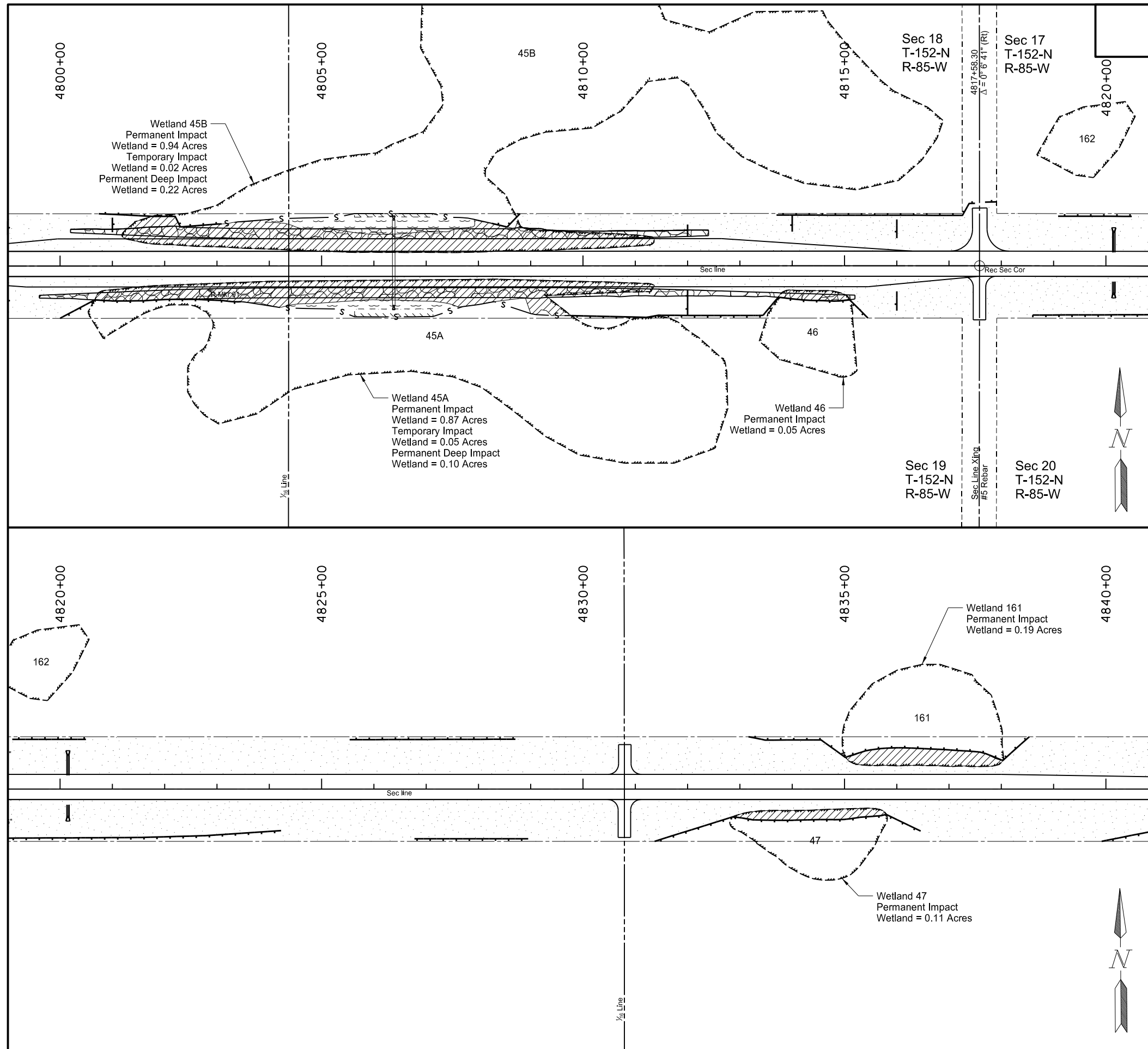


Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock Sta 4799+50 - Rt to 4800+00 Rt	16	Ton
708-1375	Flotation Silt Curtain Sta 4786+50 - Lt to 4789+00 Lt Sta 4761+00 - Rt to 4789+00 Rt	252 692	LF LF
708-1430	Fiber Roll 12 In Sta 4760+00 - Lt to 4800+00 Lt Sta 4760+00 - Rt to 4800+00 Rt	2,158 1,954	LF LF
708-2240	Seeding - Type B CL II Sta 4760+00 - Lt to 4800+00 Lt Sta 4760+00 - Rt to 4800+00 Rt	6.91 5.79	Acre Acre
708-2260	Seeding - Type B CL IV Sta 4760+00 - Lt to 4800+00 Lt Sta 4760+00 - Rt to 4800+00 Rt	6.91 5.79	Acre Acre
708-2280	Seeding - Type B CL V Sta 4760+00 - Lt to 4800+00 Lt Sta 4760+00 - Rt to 4800+00 Rt	0.05 0.05	Acre Acre
709-0600	Geotextile Fabric - Type RR Sta 4799+50 - Rt to 4800+00 Rt (12' Width)	30	SY







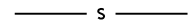
-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  Permanent Deep Water Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN

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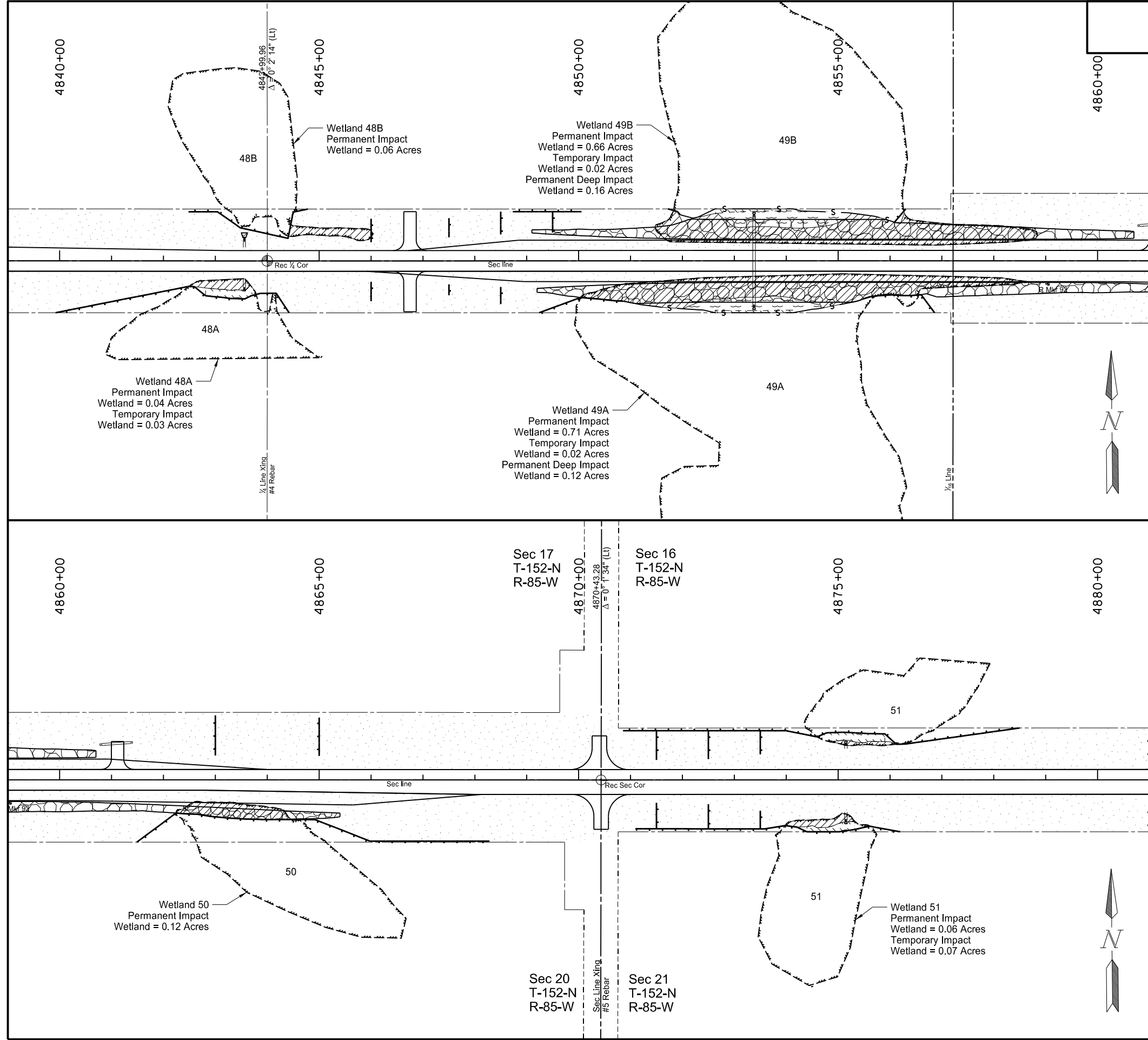


Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock		
	Sta 4800+00 - Lt to 4812+50 Lt	1,823	Ton
708-1375	Flotation Silt Curtain		
	Sta 4803+00 - Lt to 4809+00 Lt	520	LF
708-1430	Fiber Roll 12 In		
	Sta 4800+00 - Lt to 4840+00 Lt	1,878	LF
708-2240	Seeding - Type B CL II		
	Sta 4800+00 - Lt to 4840+00 Lt	4.57	Acre
708-2260	Seeding - Type B CL IV		
	Sta 4800+00 - Lt to 4840+00 Lt	4.37	Acre
708-2280	Seeding - Type B CL V		
	Sta 4800+00 - Lt to 4840+00 Lt	0.02	Acre
709-0600	Geotextile Fabric - Type RR		
	Sta 4800+00 - Lt to 4812+50 Lt (12' Width)	2,217	SY
	Sta 4800+00 - Rt to 4815+25 Rt (12' Width)	2,683	SY







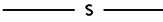
-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  Permanent Deep Water Impact
-  FIBER ROLLS 12IN
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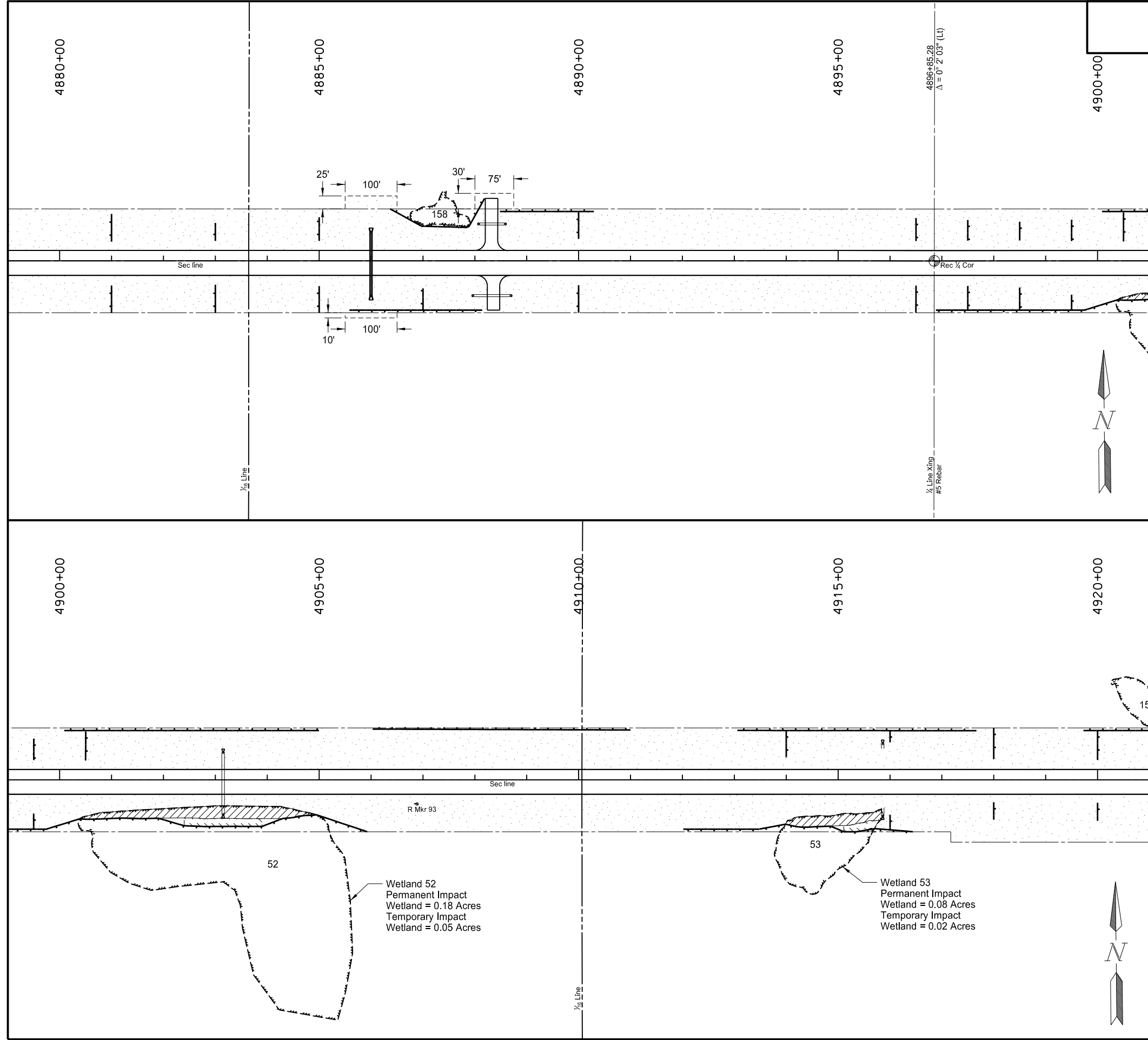


Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock Sta 4849+00 - Lt to 4861+00 Lt Sta 4849+00 - Rt to 4865+50 Rt	3,258 4,200	Ton Ton
708-1375	Flotation Silt Curtain Sta 4851+50 - Lt to 4856+00 Lt Sta 4850+50 - Rt to 4856+00 Rt	420 467	LF LF
708-1430	Fiber Roll 12 In Sta 4840+00 - Lt to 4880+00 Lt Sta 4840+00 - Rt to 4880+00 Rt	1,727 2,245	LF LF
708-2240	Seeding - Type B CL II Sta 4840+00 - Lt to 4880+00 Lt Sta 4840+00 - Rt to 4880+00 Rt	6.35 5.14	Acre Acre
708-2260	Seeding - Type B CL IV Sta 4840+00 - Lt to 4880+00 Lt Sta 4840+00 - Rt to 4880+00 Rt	6.35 5.14	Acre Acre
708-2280	Seeding - Type B CL V Sta 4840+00 - Lt to 4880+00 Lt Sta 4840+00 - Rt to 4880+00 Rt	0.06 0.08	Acre Acre
709-0600	Geotextile Fabric - Type RR Sta 4849+00 - Lt to 4861+00 Lt (12' Width) Sta 4849+00 - Rt to 4865+50 Rt (12' Width)	3,413 4,428	SY SY





-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  Permanent Deep Water Impact
-  FIBER ROLLS 12IN
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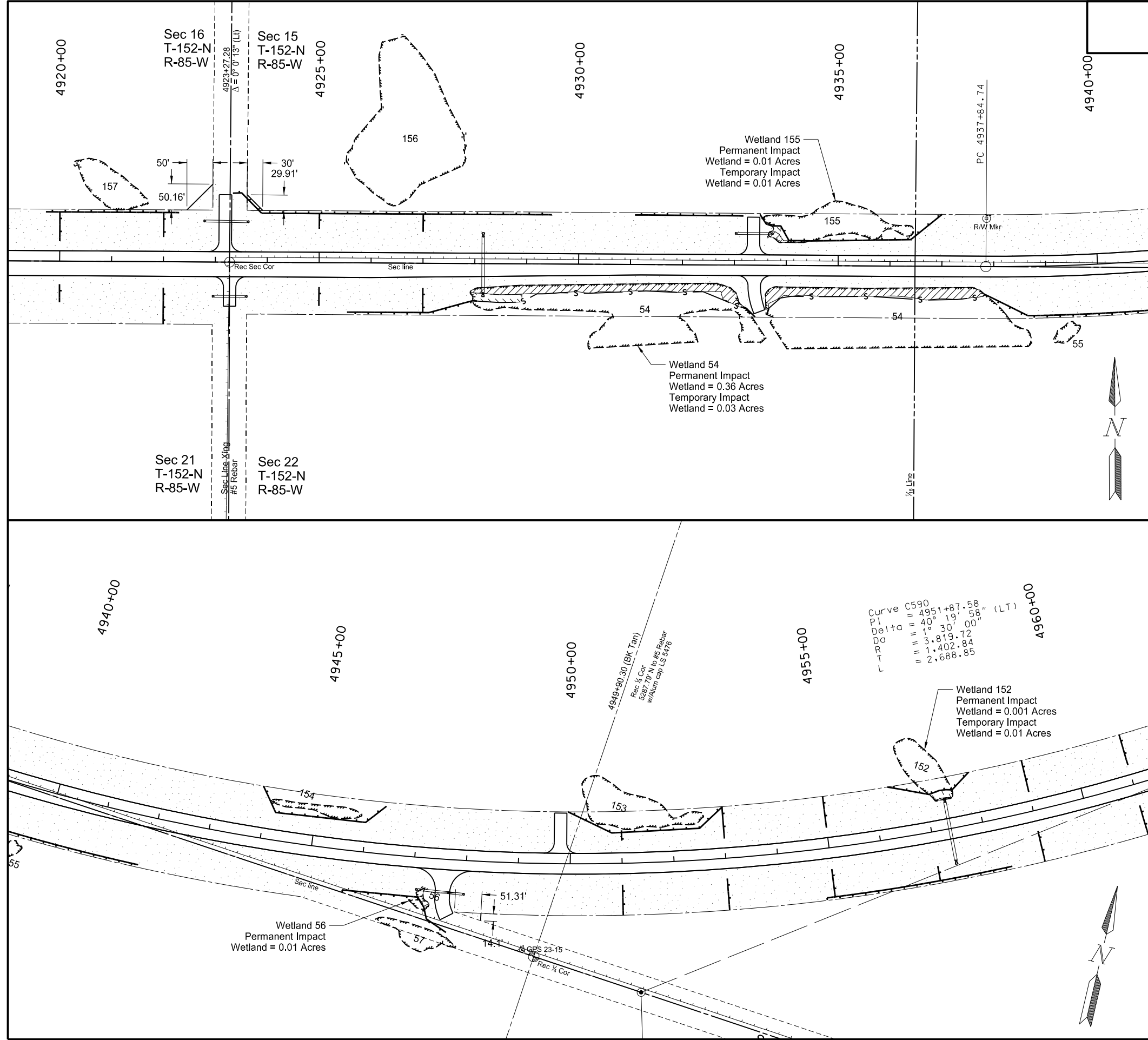


Item	Description	Quantity	Unit
708-1430	Fiber Roll 12 In Sta 4880+00 - Lt to 4920+00 Lt Sta 4880+00 - Rt to 4920+00 Rt	2,418 2,110	LF LF
708-2240	Seeding - Type B CL II Sta 4880+00 - Lt to 4920+00 Lt Sta 4880+00 - Rt to 4920+00 Rt	7.08 5.96	Acre Acre
708-2260	Seeding - Type B CL IV Sta 4880+00 - Lt to 4920+00 Lt Sta 4880+00 - Rt to 4920+00 Rt	7.08 5.96	Acre Acre
708-2280	Seeding - Type B CL V Sta 4880+00 - Rt to 4920+00 Rt	0.07	Acre







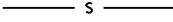
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SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
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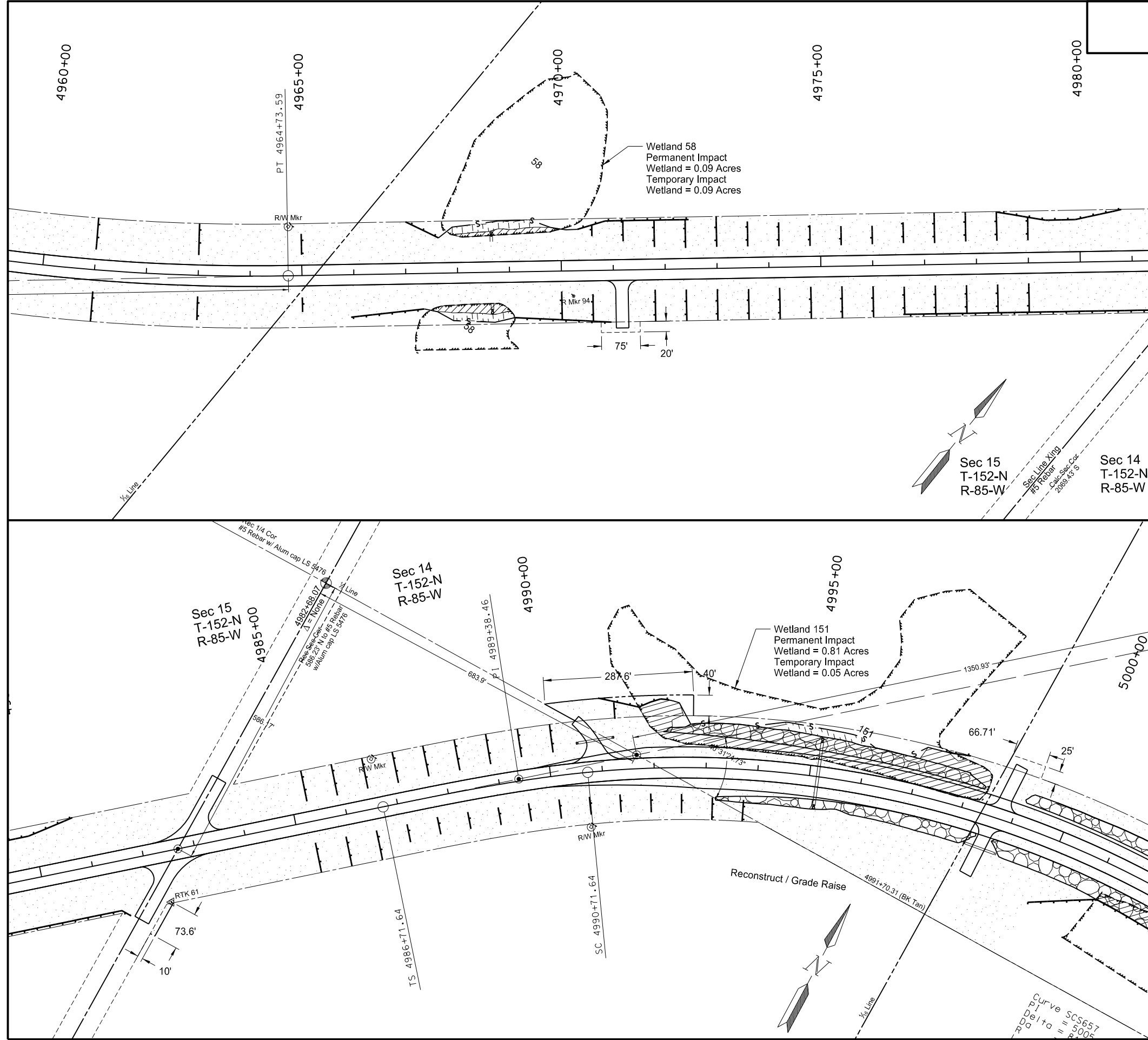


Item	Description	Quantity	Unit
708-1375	Flotation Silt Curtain Sta 4928+00 - Rt to 4938+00 Rt	946	LF
708-1430	Fiber Roll 12 In Sta 4920+00 - Lt to 4960+00 Lt Sta 4920+00 - Rt to 4960+00 Rt	2,612 1,769	LF LF
708-2240	Seeding - Type B CL II Sta 4920+00 - Lt to 4960+00 Lt Sta 4920+00 - Rt to 4960+00 Rt	6.22 5.70	Acre Acre
708-2260	Seeding - Type B CL IV Sta 4920+00 - Lt to 4960+00 Lt Sta 4920+00 - Rt to 4960+00 Rt	6.22 5.70	Acre Acre
708-2280	Seeding - Type B CL V Sta 4920+00 - Lt to 4960+00 Lt Sta 4920+00 - Rt to 4960+00 Rt	0.02 0.03	Acre Acre





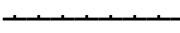
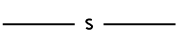
-  SEEDING-TYPE B CL II
-  SEEDING-TYPE B CL IV
-  MULCHING
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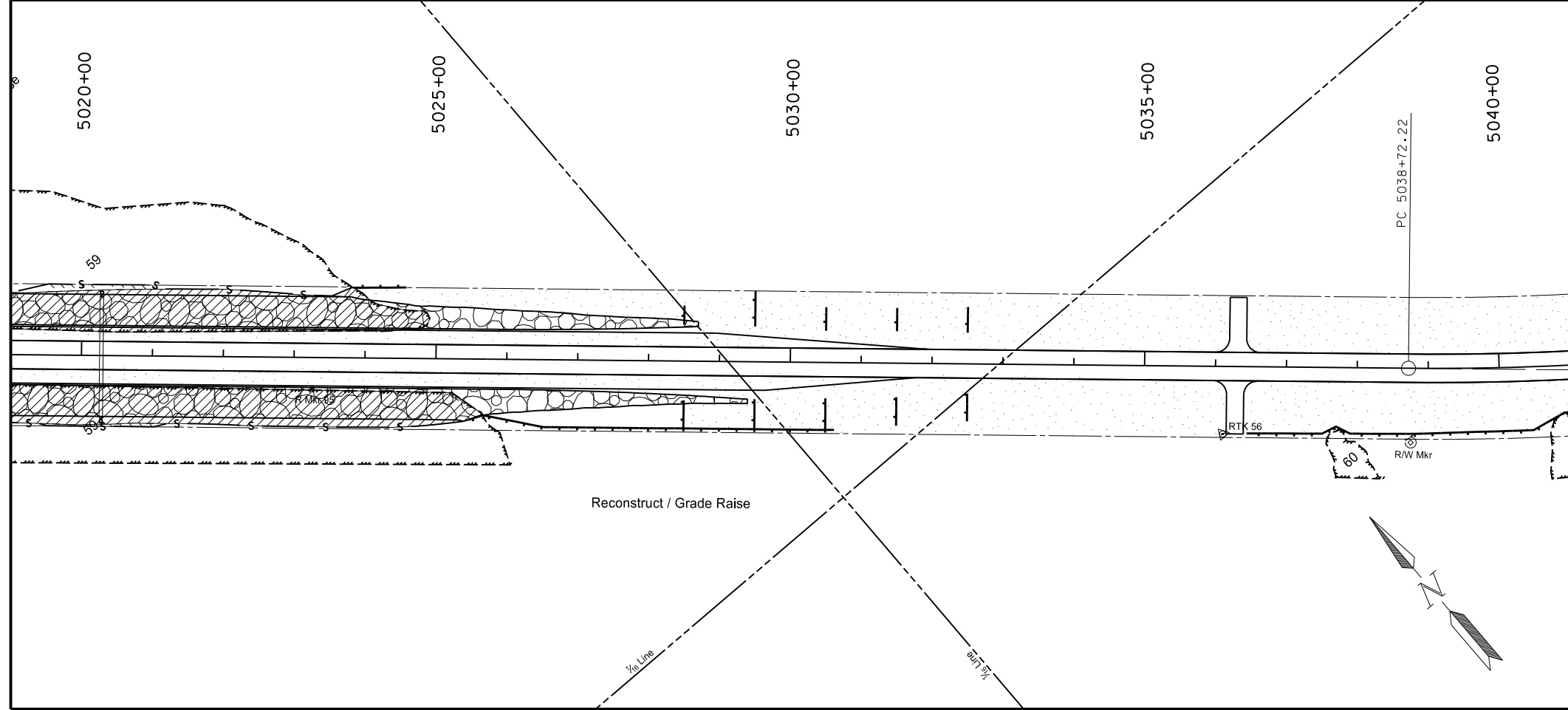
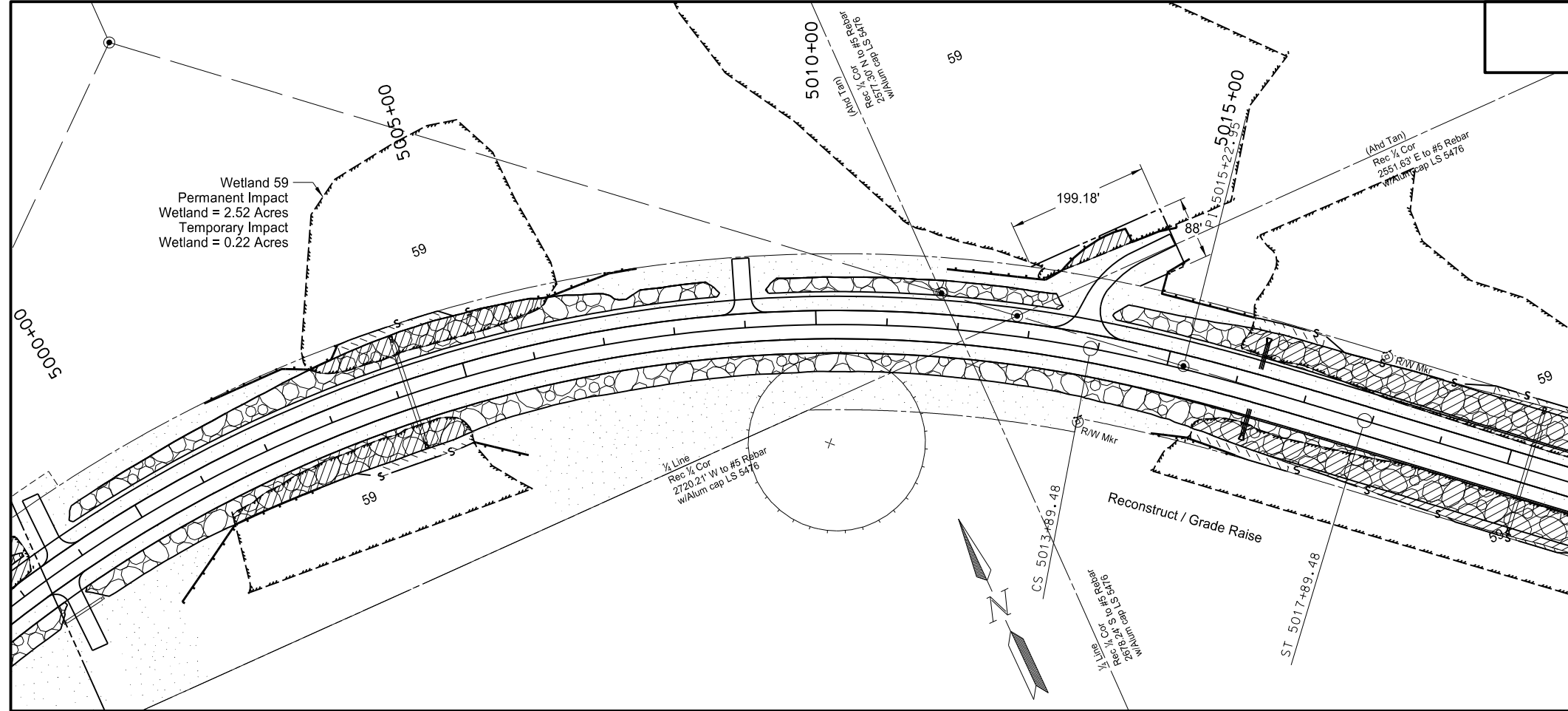
Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock Sta 4992+00 - Lt to 5000+00 Lt Sta 4993+00 - Rt to 5000+00 Rt	1,629 1,532	Ton Ton
708-1375	Flotation Silt Curtain Sta 4967+50 - Lt to 4997+50 Lt Sta 4967+00 - Rt to 4969+50 Rt	861 181	LF LF
708-1430	Fiber Roll 12 In Sta 4960+00 - Lt to 5000+00 Lt Sta 4960+00 - Rt to 5000+00 Rt	2,130 2,446	LF LF
708-2240	Seeding - Type B CL II Sta 4960+00 - Lt to 5000+00 Lt Sta 4960+00 - Rt to 5000+00 Rt	5.96 7.69	Acre Acre
708-2260	Seeding - Type B CL IV Sta 4960+00 - Lt to 5000+00 Lt Sta 4960+00 - Rt to 5000+00 Rt	5.96 7.69	Acre Acre
708-2280	Seeding - Type B CL V Sta 4960+00 - Lt to 5000+00 Lt Sta 4960+00 - Rt to 5000+00 Rt	0.10 0.04	Acre Acre
709-0600	Geotextile Fabric - Type RR Sta 4992+00 - Lt to 5000+00 Lt (12' Width) Sta 4993+00 - Rt to 5000+00 Rt (12' Width)	1,821 1,450	SY SY

-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN






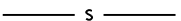
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ND	AC-SOI-NH-4-023(019)087	75	11



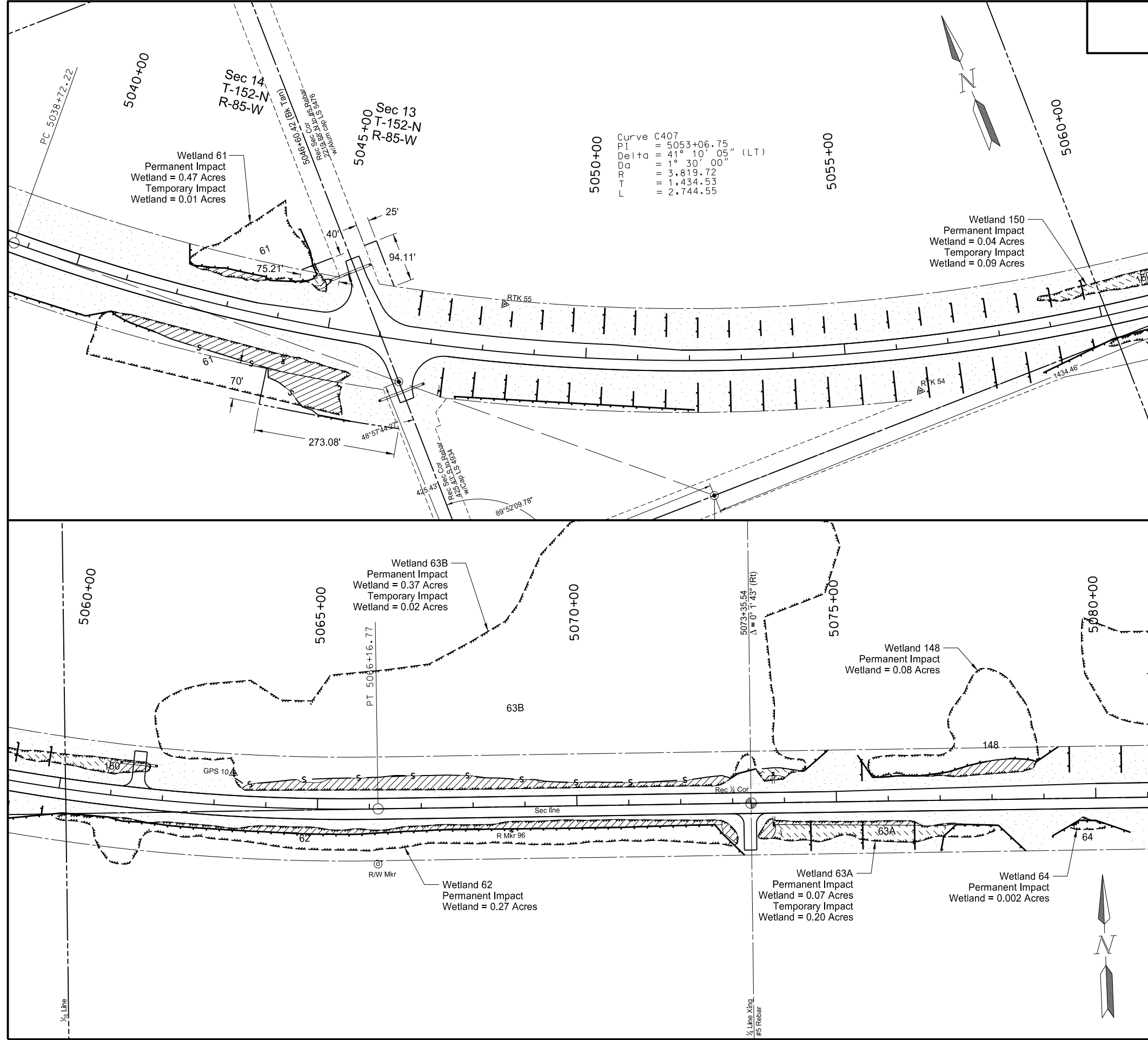
Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock Sta 5000+00 - Lt to 5029+00 Lt Sta 5000+00 - Rt to 5029+50 Rt	9,327 11,154	Ton Ton
708-1375	Flotation Silt Curtain Sta 5003+00 - Lt to 5024+00 Lt Sta 5002+00 - Rt to 5026+00 Rt	1,077 1,152	LF LF
708-1430	Fiber Roll 12 In Sta 5000+00 - Lt to 5040+00 Lt Sta 5000+00 - Rt to 5040+00 Rt	1,191 1,540	LF LF
708-2240	Seeding - Type B CL II Sta 5000+00 - Lt to 5040+00 Lt Sta 5000+00 - Rt to 5040+00 Rt	4.79 5.42	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5000+00 - Lt to 5040+00 Lt Sta 5000+00 - Rt to 5040+00 Rt	4.79 5.42	Acre Acre
708-2280	Seeding - Type B CL V Sta 5000+00 - Lt to 5040+00 Lt Sta 5000+00 - Rt to 5040+00 Rt	0.11 0.11	Acre Acre
709-0600	Geotextile Fabric - Type RR Sta 5000+00 - Lt to 5029+00 Lt (12' Width) Sta 5000+00 - Rt to 5029+50 Rt (12' Width)	9,515 10,932	SY SY

-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN





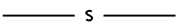
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Wetlands, Erosion Control,
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ND 23 - ND 28 to US 83

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	75	12

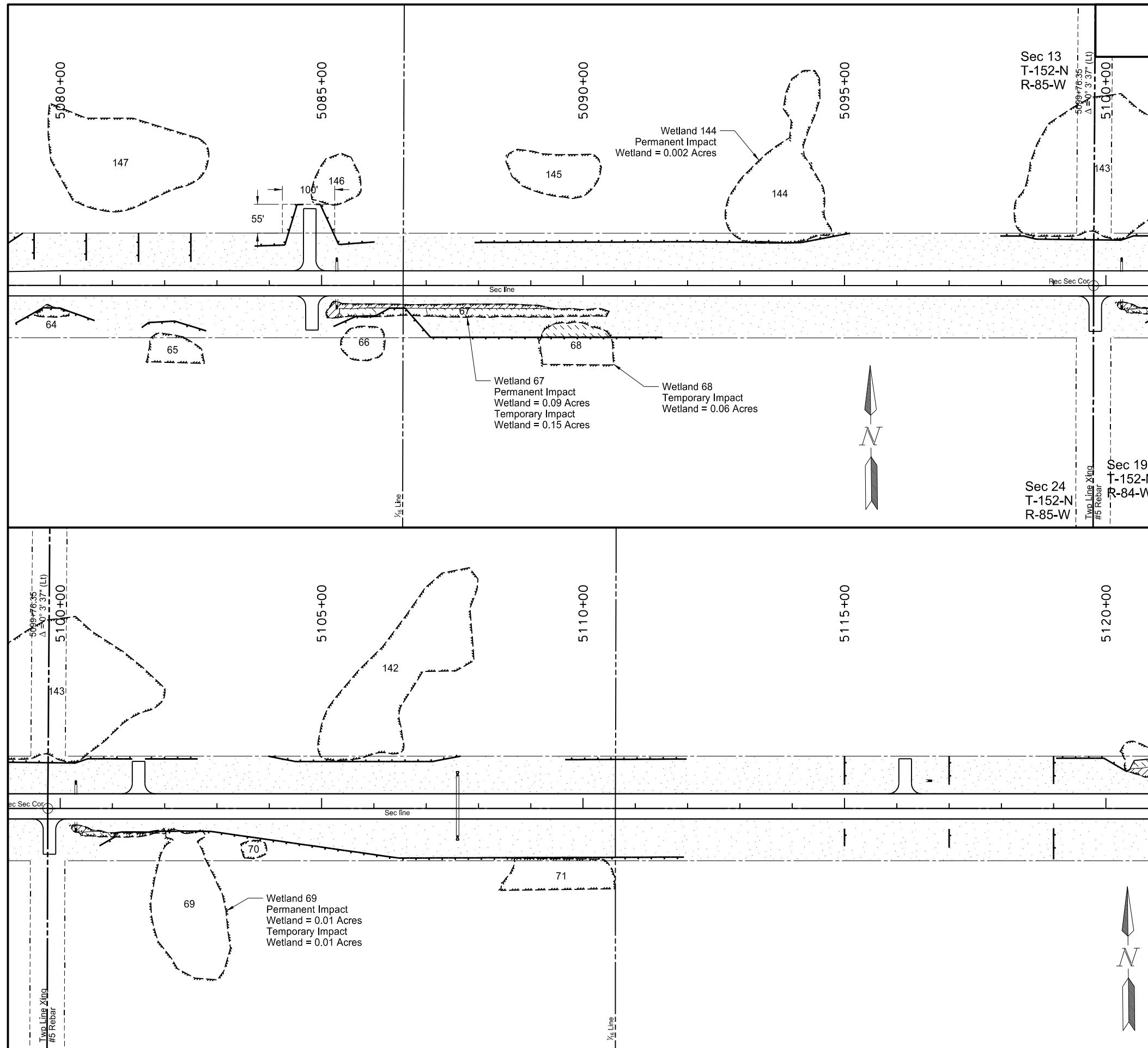


Item	Description	Quantity	Unit
708-1375	Flotation Silt Curtain Sta 5063+00 - Lt to 5079+00 Lt Sta 5041+00 - Rt to 5046+00 Rt	1,091 370	LF LF
708-1430	Fiber Roll 12 In Sta 5040+00 - Lt to 5080+00 Lt Sta 5040+00 - Rt to 5080+00 Rt	1,835 3,739	LF LF
708-2240	Seeding - Type B CL II Sta 5040+00 - Lt to 5080+00 Lt Sta 5040+00 - Rt to 5080+00 Rt	4.60 4.44	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5040+00 - Lt to 5080+00 Lt Sta 5040+00 - Rt to 5080+00 Rt	4.60 4.44	Acre Acre
708-2280	Seeding - Type B CL V Sta 5040+00 - Lt to 5080+00 Lt Sta 5040+00 - Rt to 5080+00 Rt	0.12 0.20	Acre Acre





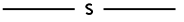
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN

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ND 23 - ND 28 to US 83

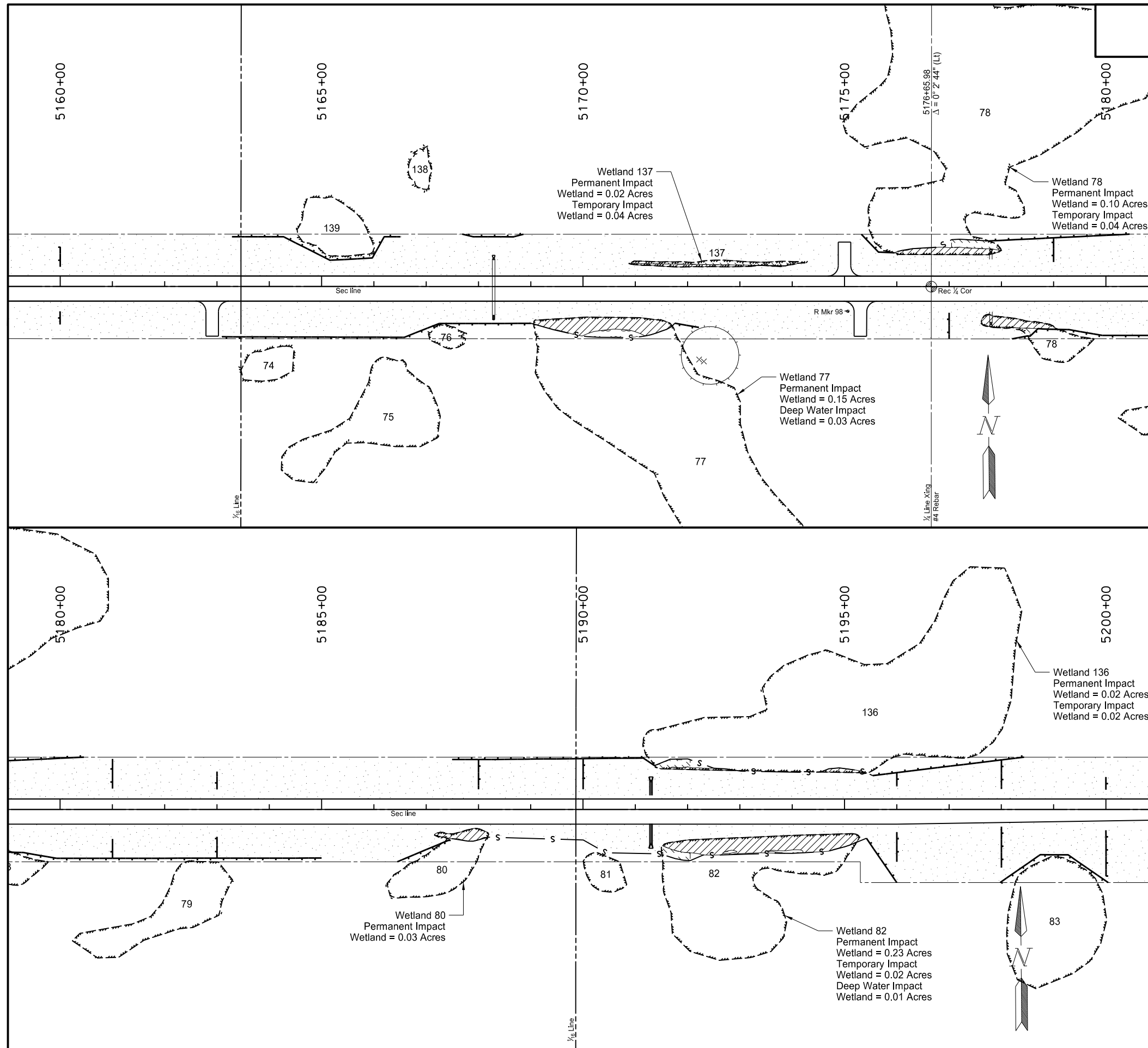


Item	Description	Quantity	Unit
708-1430	Fiber Roll 12 In Sta 5080+00 - Lt to 5120+00 Lt Sta 5080+00 - Rt to 5120+00 Rt	2,498 2,125	LF LF
708-2240	Seeding - Type B CL II Sta 5080+00 - Lt to 5120+00 Lt Sta 5080+00 - Rt to 5120+00 Rt	6.00 6.00	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5080+00 - Lt to 5120+00 Lt Sta 5080+00 - Rt to 5120+00 Rt	6.00 6.00	Acre Acre
708-2280	Seeding - Type B CL V Sta 5080+00 - Rt to 5120+00 Rt	0.22	Acre








-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN

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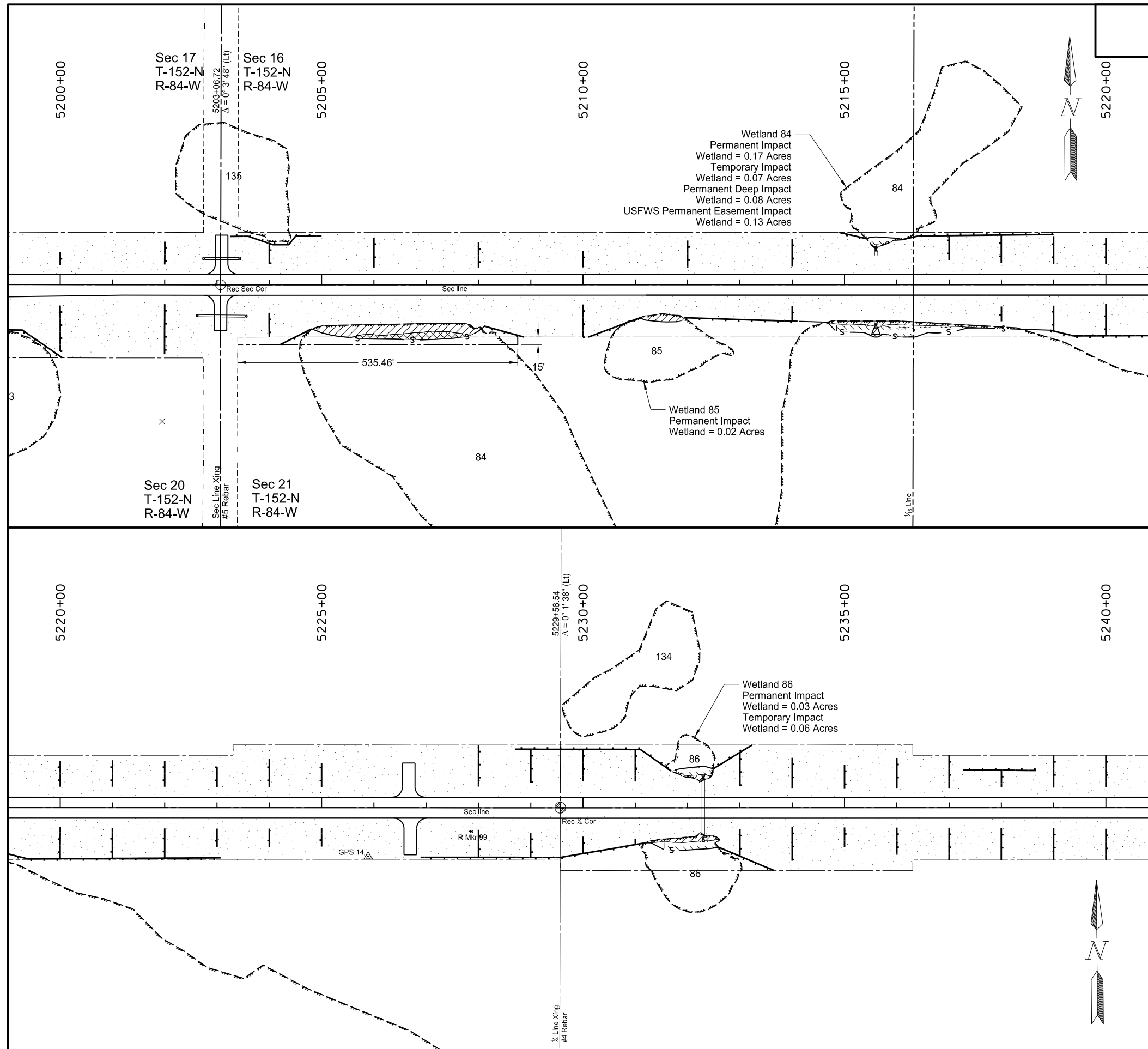
Item	Description	Quantity	Unit
708-1375	Flotation Silt Curtain		
	Sta 5175+50 - Lt to 5196+00 Lt	612	LF
	Sta 5168+00 - Rt to 5196+00 Rt	1,097	LF
708-1430	Fiber Roll 12 In		
	Sta 5160+00 - Lt to 5200+00 Lt	1,879	LF
	Sta 5160+00 - Rt to 5200+00 Rt	2,040	LF
708-2240	Seeding - Type B CL II		
	Sta 5160+00 - Lt to 5200+00 Lt	6.34	Acre
	Sta 5160+00 - Rt to 5200+00 Rt	5.23	Acre
708-2260	Seeding - Type B CL IV		
	Sta 5160+00 - Lt to 5200+00 Lt	6.34	Acre
	Sta 5160+00 - Rt to 5200+00 Rt	5.23	Acre
708-2280	Seeding - Type B CL V		
	Sta 5160+00 - Lt to 5200+00 Lt	0.09	Acre
	Sta 5160+00 - Rt to 5200+00 Rt	0.03	Acre

-  SEEDING-TYPE B CL II
-  SEEDING-TYPE B CL IV
-  MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN







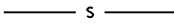
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ND 23 - ND 28 to US 83

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	75	16

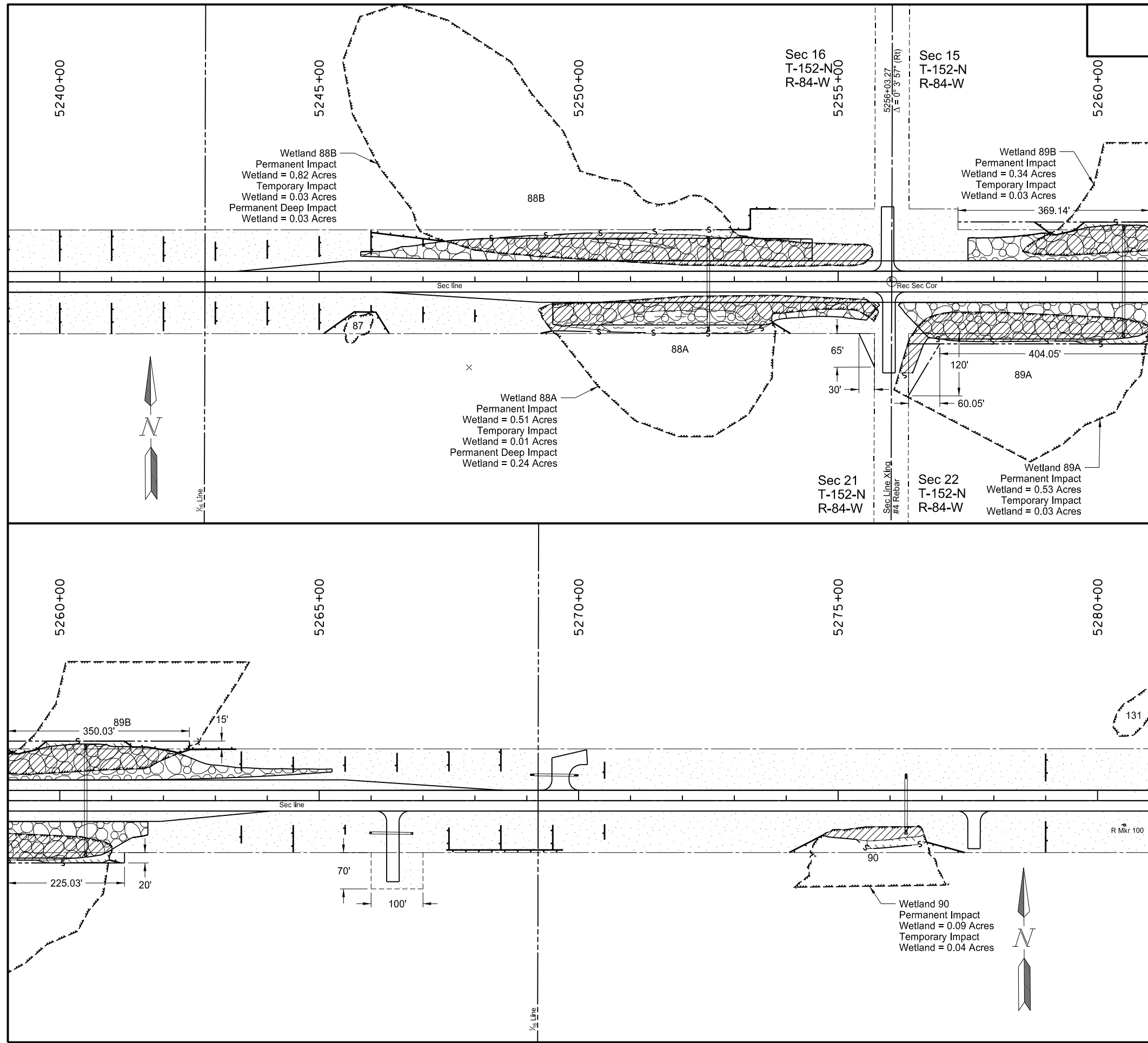


Item	Description	Quantity	Unit
708-1375	Flotation Silt Curtain Sta 5215+00 - Lt to 5233+00 Lt Sta 5204+50 - Rt to 5233+00 Rt	152 1,069	LF LF
708-1430	Fiber Roll 12 In Sta 5200+00 - Lt to 5240+00 Lt Sta 5200+00 - Rt to 5240+00 Rt	2,501 2,714	LF LF
708-2240	Seeding - Type B CL II Sta 5200+00 - Lt to 5240+00 Lt Sta 5200+00 - Rt to 5240+00 Rt	7.37 6.58	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5200+00 - Lt to 5240+00 Lt Sta 5200+00 - Rt to 5240+00 Rt	7.37 6.58	Acre Acre
708-2280	Seeding - Type B CL V Sta 5200+00 - Lt to 5240+00 Lt Sta 5200+00 - Rt to 5240+00 Rt	0.04 0.09	Acre Acre







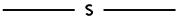
-  SEEDING-TYPE B CL II
-  SEEDING-TYPE B CL IV
-  MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  FIBER ROLLS 12IN
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ND 23 - ND 28 to US 83

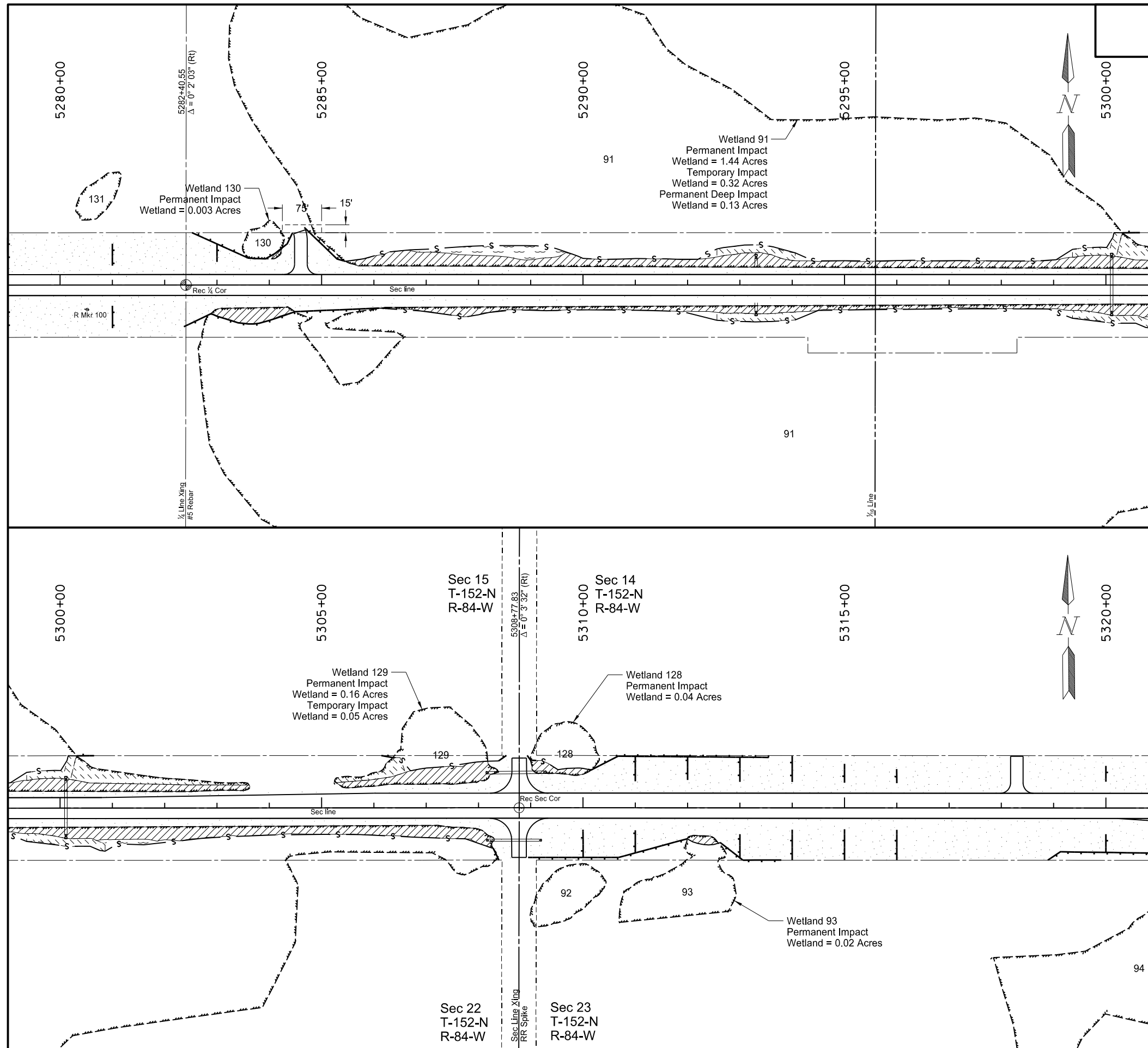


Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock Sta 5245+75 - Lt to 5265+25 Lt Sta 5249+50 - Rt to 5262+00 Rt	7,698 6,786	Ton Ton
708-1375	Flotation Silt Curtain Sta 5247+00 - Lt to 5262+50 Lt Sta 5249+00 - Rt to 5277+00 Rt	704 1,220	LF LF
708-1430	Fiber Roll 12 In Sta 5240+00 - Lt to 5280+00 Lt Sta 5240+00 - Rt to 5280+00 Rt	1,253 1,275	LF LF
708-2240	Seeding - Type B CL II Sta 5240+00 - Lt to 5280+00 Lt Sta 5240+00 - Rt to 5280+00 Rt	5.53 5.32	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5240+00 - Lt to 5280+00 Lt Sta 5240+00 - Rt to 5280+00 Rt	5.53 5.32	Acre Acre
708-2280	Seeding - Type B CL V Sta 5240+00 - Lt to 5280+00 Lt Sta 5240+00 - Rt to 5280+00 Rt	0.06 0.08	Acre Acre
709-0600	Geotextile Fabric - Type RR Sta 5245+75 - Lt to 5265.25 Lt (12' Width) Sta 5249+50 - Rt to 5262+00 Rt (12' Width)	7,396 6,490	SY SY








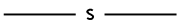
-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  Permanent Deep Water Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN

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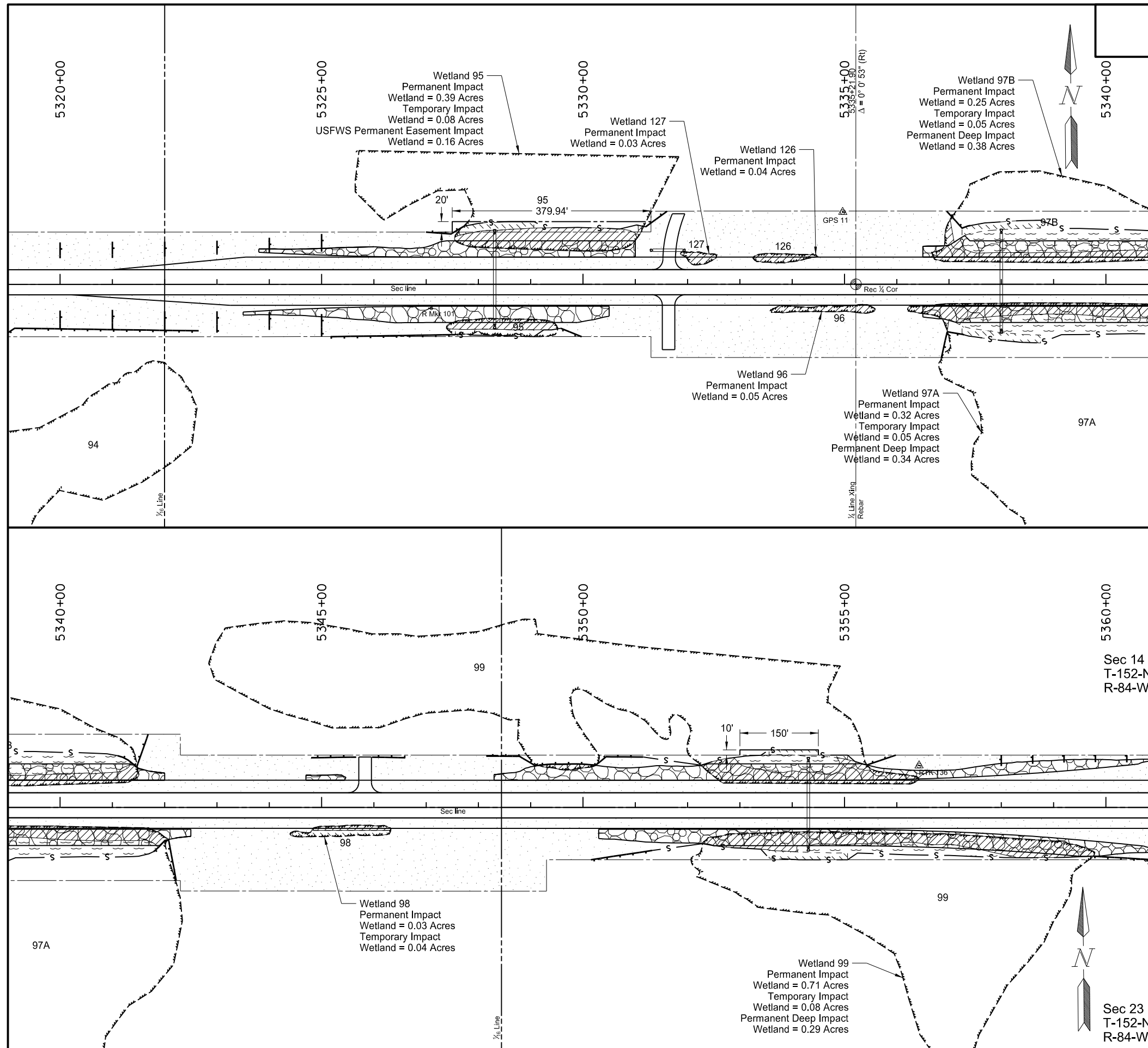


Item	Description	Quantity	Unit
708-1375	Flotation Silt Curtain Sta 5285+00 - Lt to 5311+00 Lt Sta 5285+00 - Rt to 5313+00 Rt	1,847 2,306	LF LF
708-1430	Fiber Roll 12 In Sta 5280+00 - Lt to 5320+00 Lt Sta 5280+00 - Rt to 5320+00 Rt	1,107 1,325	LF LF
708-2240	Seeding - Type B CL II Sta 5280+00 - Lt to 5320+00 Lt Sta 5280+00 - Rt to 5320+00 Rt	3.00 3.49	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5280+00 - Lt to 5320+00 Lt Sta 5280+00 - Rt to 5320+00 Rt	3.00 3.49	Acre Acre
708-2280	Seeding - Type B CL V Sta 5280+00 - Lt to 5320+00 Lt Sta 5280+00 - Rt to 5320+00 Rt	0.27 0.10	Acre Acre







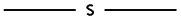
-  SEEDING-TYPE B CL II
-  SEEDING-TYPE B CL IV
-  MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  Permanent Deep Water Impact
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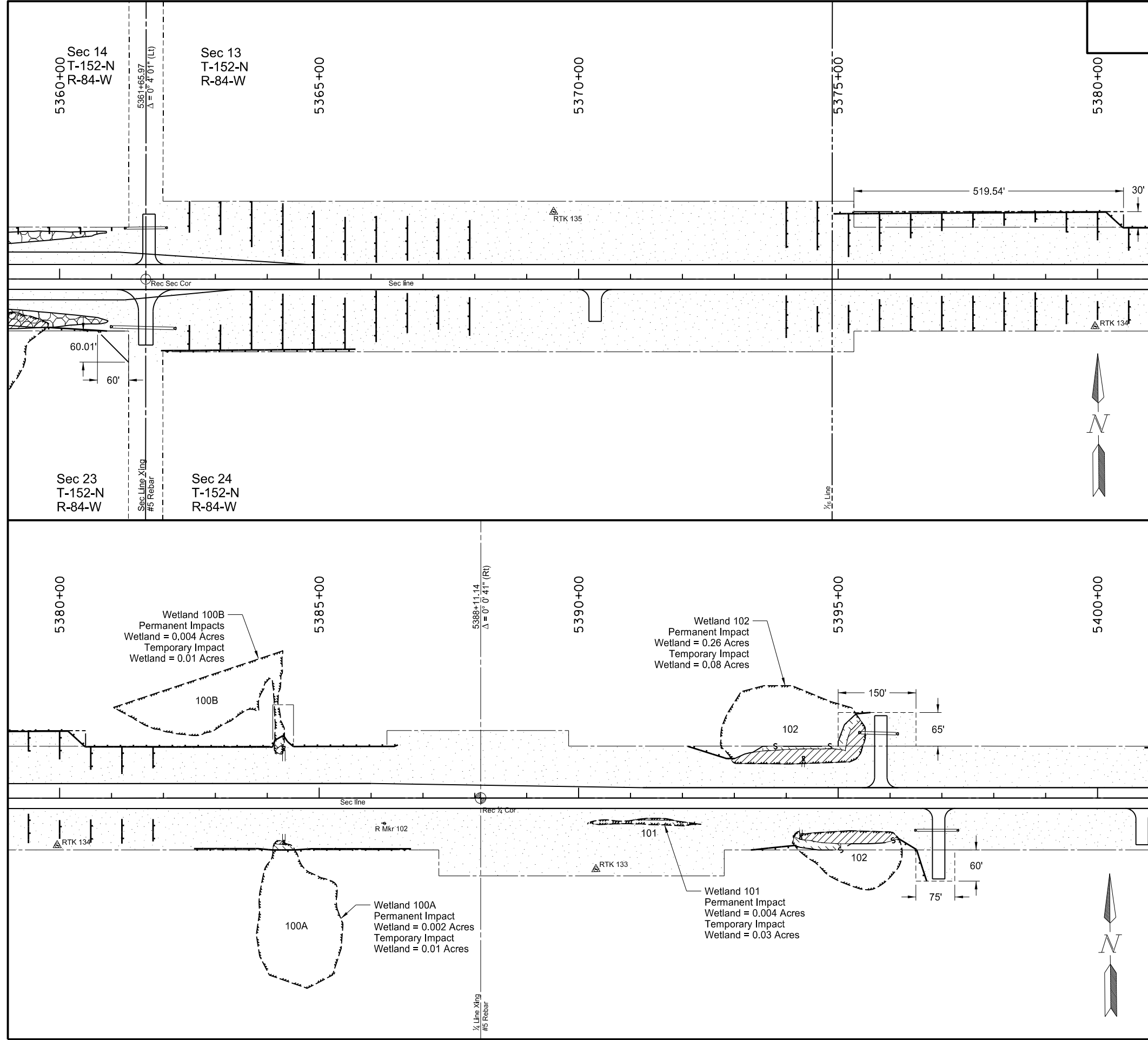
Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock Sta 5323+75 - Lt to 5360+00 Lt Sta 5323+50 - Rt to 5360+00 Rt	6,627 6,675	Ton Ton
708-1375	Flotation Silt Curtain Sta 5327+50 - Lt to 5356+00 Lt Sta 5327+00 - Rt to 5360+00 Rt	1,175 1,517	LF LF
708-1430	Fiber Roll 12 In Sta 5320+00 - Lt to 5360+00 Lt Sta 5320+00 - Rt to 5360+00 Rt	1,059 1,118	LF LF
708-2240	Seeding - Type B CL II Sta 5320+00 - Lt to 5360+00 Lt Sta 5320+00 - Rt to 5360+00 Rt	4.74 5.88	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5320+00 - Lt to 5360+00 Lt Sta 5320+00 - Rt to 5360+00 Rt	4.74 5.88	Acre Acre
708-2280	Seeding - Type B CL V Sta 5320+00 - Lt to 5360+00 Lt Sta 5320+00 - Rt to 5360+00 Rt	0.12 0.17	Acre Acre
709-0600	Geotextile Fabric - Type RR Sta 5324+00 - Lt to 5360+00 Lt (12' Width) Sta 5323+50 - Rt to 5360+00 Rt (12' Width)	6,933 7,029	SY SY

-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  Permanent Deep Water Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN






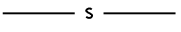
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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	75	20



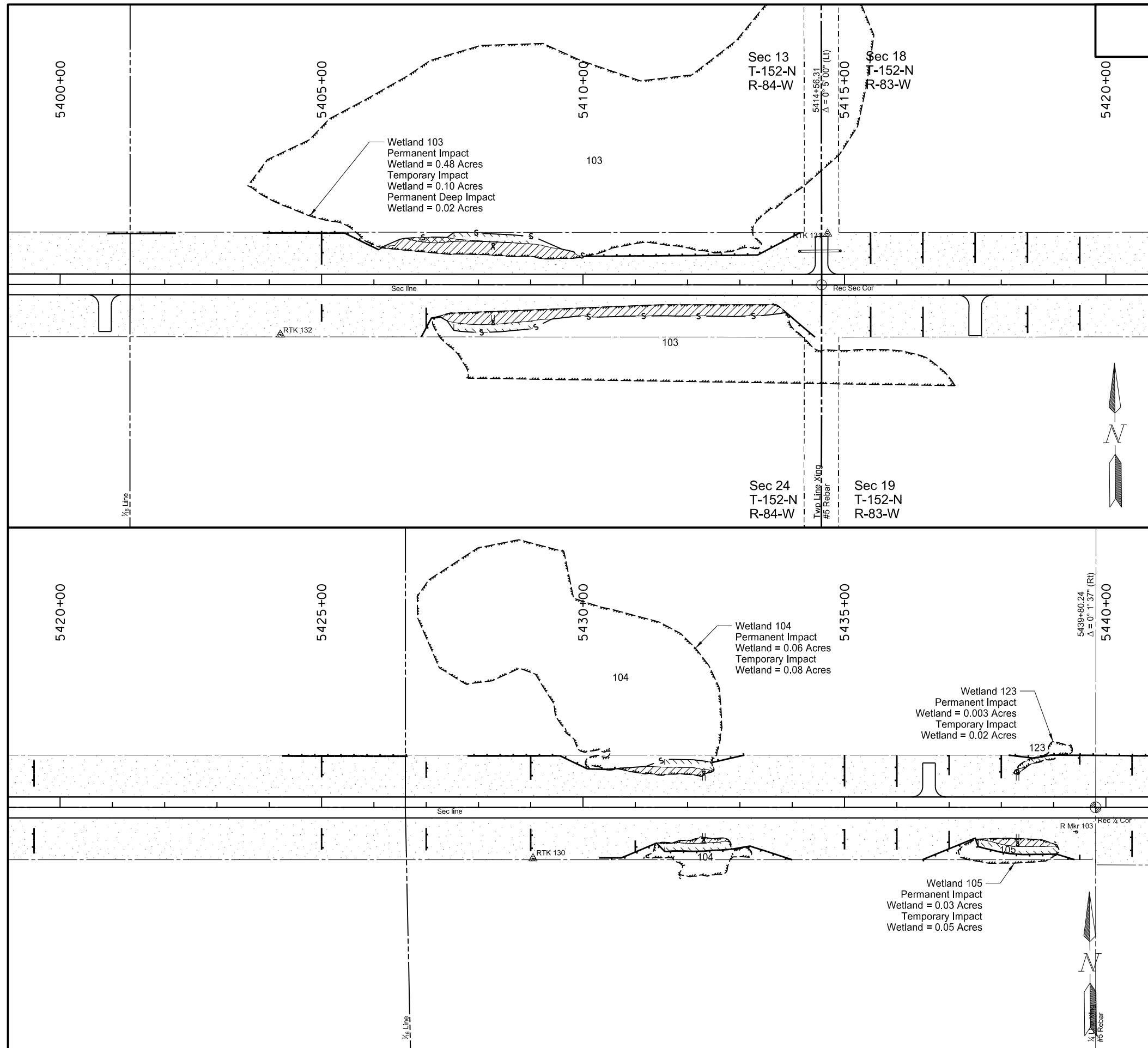
Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock Sta 5360+00 - Lt to 5361+00 Lt Sta 5360+00 - Rt to 5361+00 Rt	62 132	Ton Ton
708-1375	Flotation Silt Curtain Sta 5393+00 - Lt to 5396+00 Lt Sta 5394+00 - Rt to 5396+50 Rt	279 206	LF LF
708-1430	Fiber Roll 12 In Sta 5360+00 - Lt to 5400+00 Lt Sta 5360+00 - Rt to 5400+00 Rt	2,891 2,746	LF LF
708-2240	Seeding - Type B CL II Sta 5360+00 - Lt to 5400+00 Lt Sta 5360+00 - Rt to 5400+00 Rt	8.68 8.85	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5360+00 - Lt to 5400+00 Lt Sta 5360+00 - Rt to 5400+00 Rt	8.68 8.85	Acre Acre
708-2280	Seeding - Type B CL V Sta 5360+00 - Lt to 5400+00 Lt Sta 5360+00 - Rt to 5400+00 Rt	0.06 0.07	Acre Acre
709-0600	Geotextile Fabric - Type RR Sta 5360+00 - Lt to 5361+00 Lt (12' Width) Sta 5360+00 - Rt to 5361+00 Rt (12' Width)	94 162	SY SY

-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN







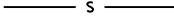
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ND	AC-SOI-NH-4-023(019)087	75	21



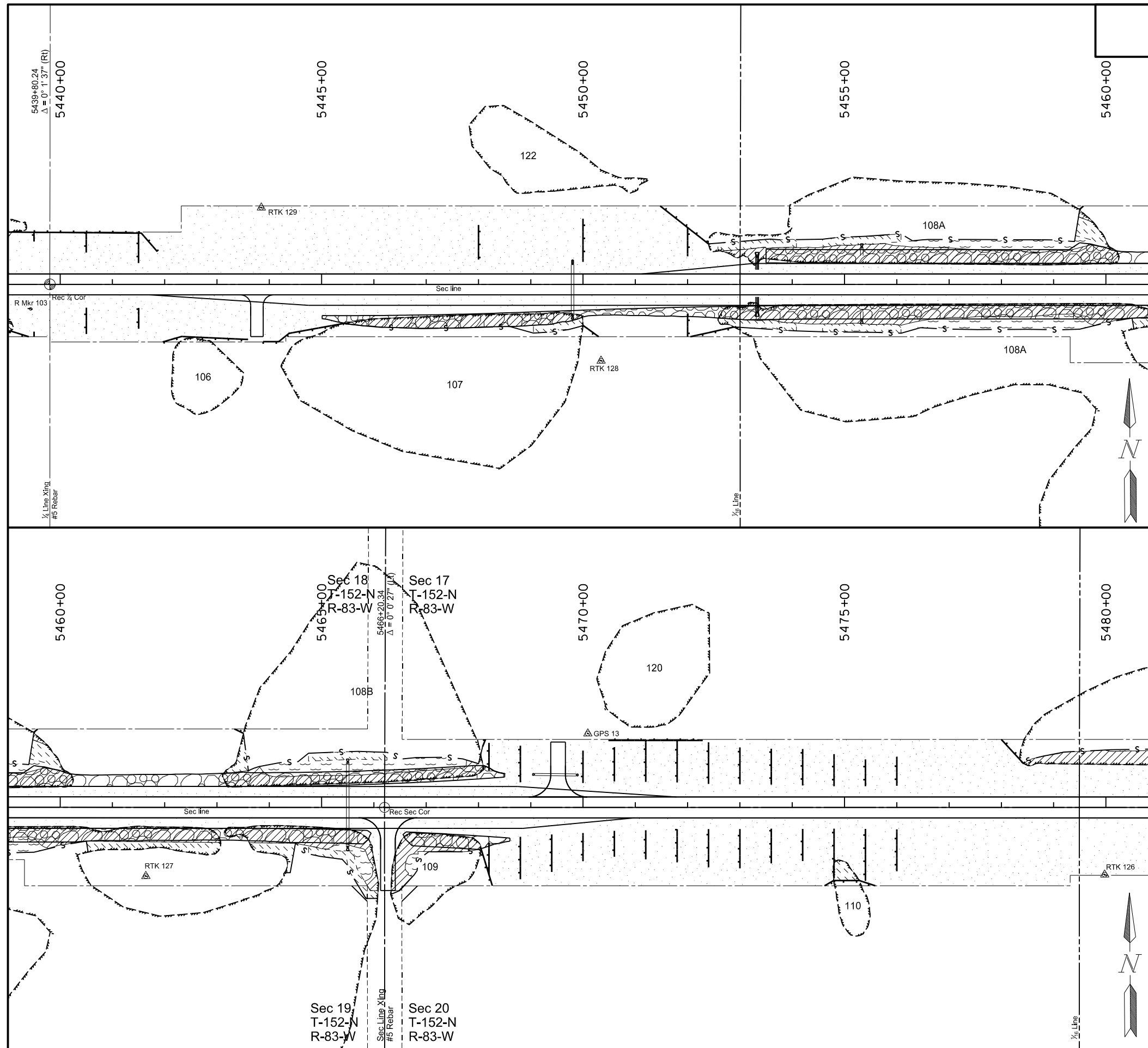
Item	Description	Quantity	Unit
708-1375	Flotation Silt Curtain		
	Sta 5405+50 - Lt to 5433+00 Lt	597	LF
	Sta 5407+00 - Rt to 5414+50 Rt	677	LF
708-1430	Fiber Roll 12 In		
	Sta 5400+00 - Lt to 5440+00 Lt Sta 5400+00 - Rt to 5440+00 Rt	2,255 1,398	LF LF
708-2240	Seeding - Type B CL II		
	Sta 5400+00 - Lt to 5440+00 Lt Sta 5400+00 - Rt to 5440+00 Rt	6.14 5.78	Acre Acre
708-2260	Seeding - Type B CL IV		
	Sta 5400+00 - Lt to 5440+00 Lt Sta 5400+00 - Rt to 5440+00 Rt	6.14 6.78	Acre Acre
708-2280	Seeding - Type B CL V		
	Sta 5400+00 - Lt to 5440+00 Lt Sta 5400+00 - Rt to 5440+00 Rt	0.11 0.14	Acre Acre

-  SEEDING-TYPE B CL II
-  SEEDING-TYPE B CL IV
-  MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN






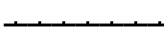
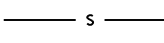
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Wetlands, Erosion Control,
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ND 23 - ND 28 to US 83

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	75	22

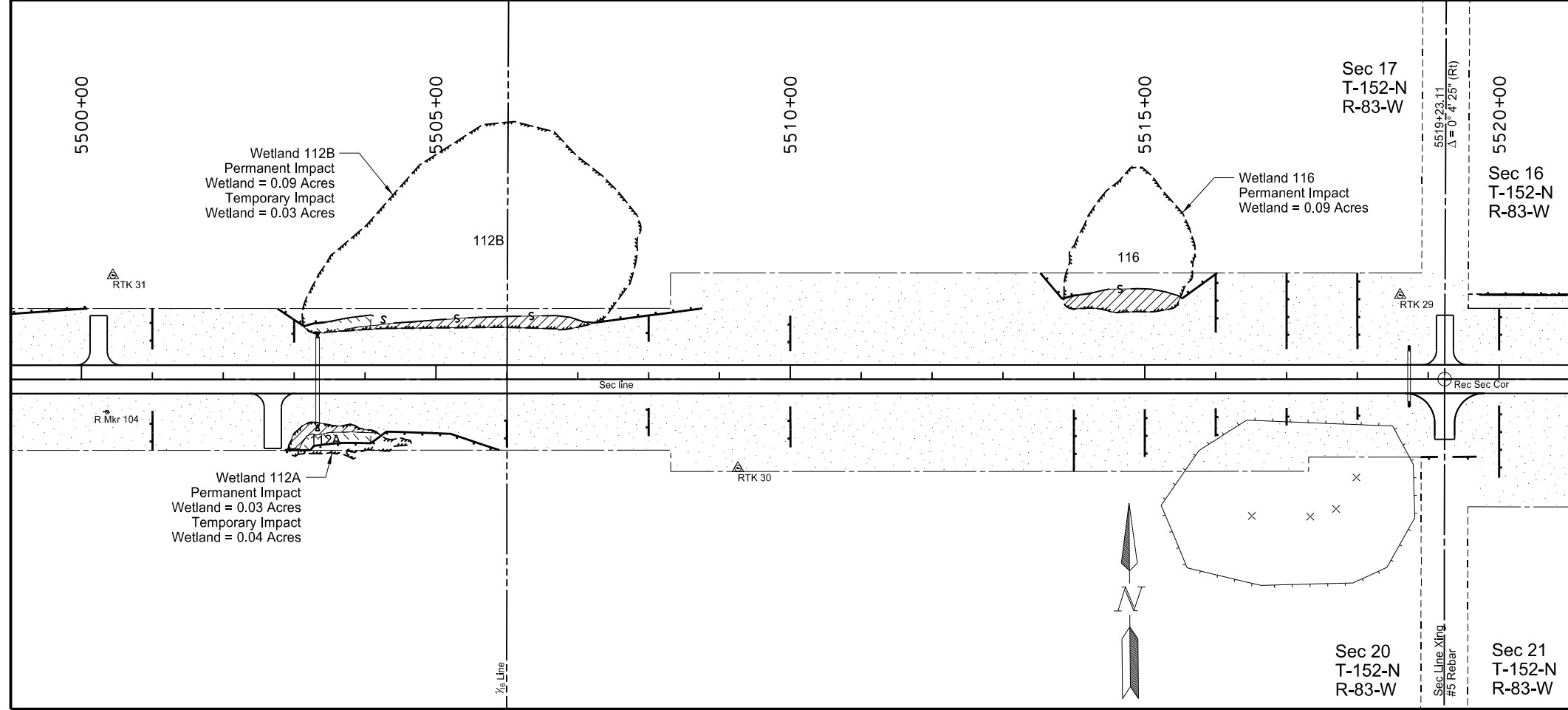
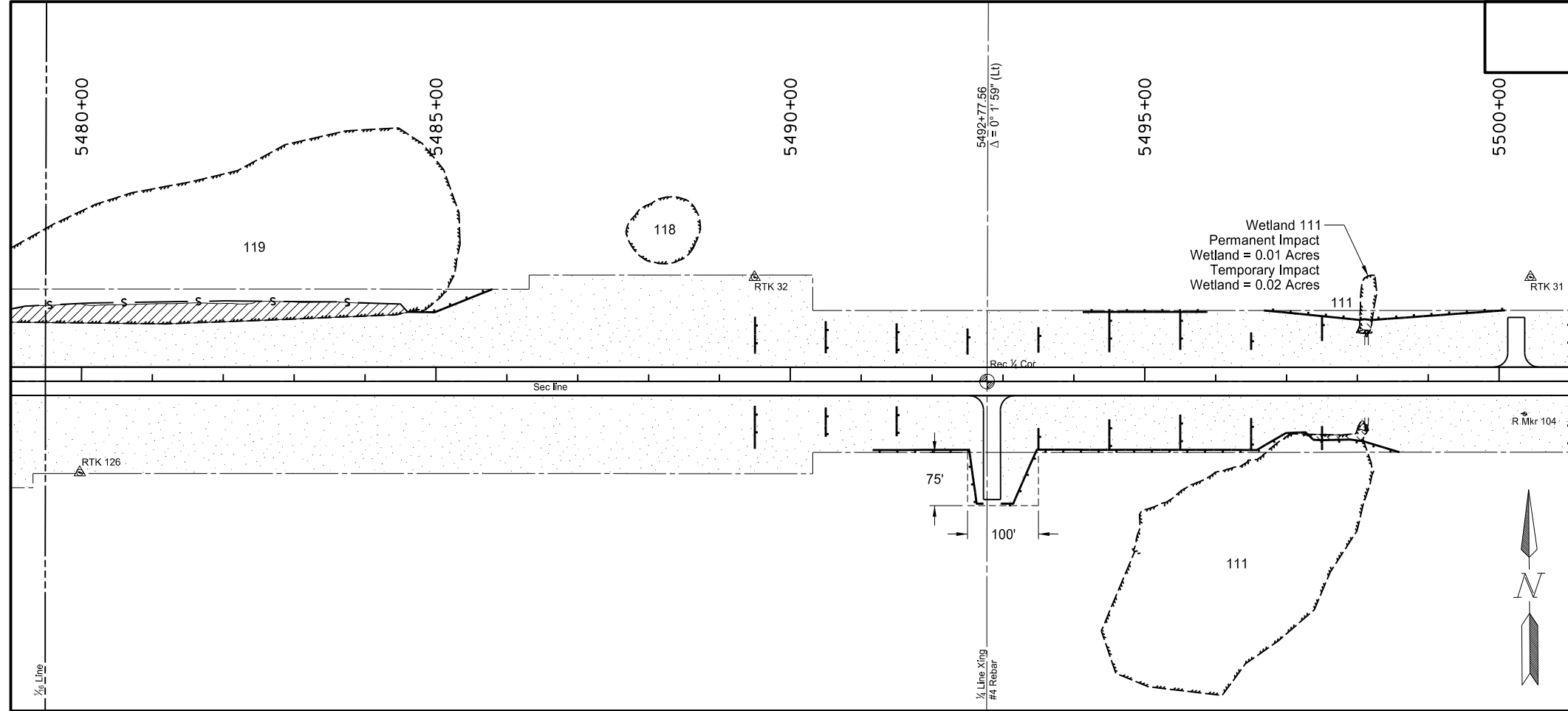


Item	Description	Quantity	Unit
708-1030	Riprap - Loose Rock Sta 5453+50 - Lt to 5468+50 Lt Sta 5445+00 - Rt to 5468+50 Rt	4,014 5,452	Ton Ton
708-1375	Flotation Silt Curtain Sta 5452+00 - Lt to 5480+00 Lt Sta 5445+00 - Rt to 5469+00 Rt	1,486 1,740	LF LF
708-1430	Fiber Roll 12 In Sta 5440+00 - Lt to 5480+00 Lt Sta 5440+00 - Rt to 5480+00 Rt	1,772 1,745	LF LF
708-2240	Seeding - Type B CL II Sta 5440+00 - Lt to 5480+00 Lt Sta 5440+00 - Rt to 5480+00 Rt	6.59 5.49	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5440+00 - Lt to 5480+00 Lt Sta 5440+00 - Rt to 5480+00 Rt	6.59 5.49	Acre Acre
708-2280	Seeding - Type B CL V Sta 5440+00 - Lt to 5480+00 Lt Sta 5440+00 - Rt to 5480+00 Rt	0.20 0.37	Acre Acre
709-0600	Geotextile Fabric - Type RR Sta 5453+50 - Lt to 5468+50 Lt (12' Width) Sta 5445+00 - Rt to 5468+50 Rt (12' Width)	4,251 5,899	SY SY

-  RIPRAP-LOOSE ROCK
-  SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
-  Permanent Wetland Impact
-  Temporary Wetland Impact
-  Permanent Deep Water Impact
-  FIBER ROLLS 12IN
-  FLOTATION SILT CURTAIN

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ND 23 - ND 28 to US 83



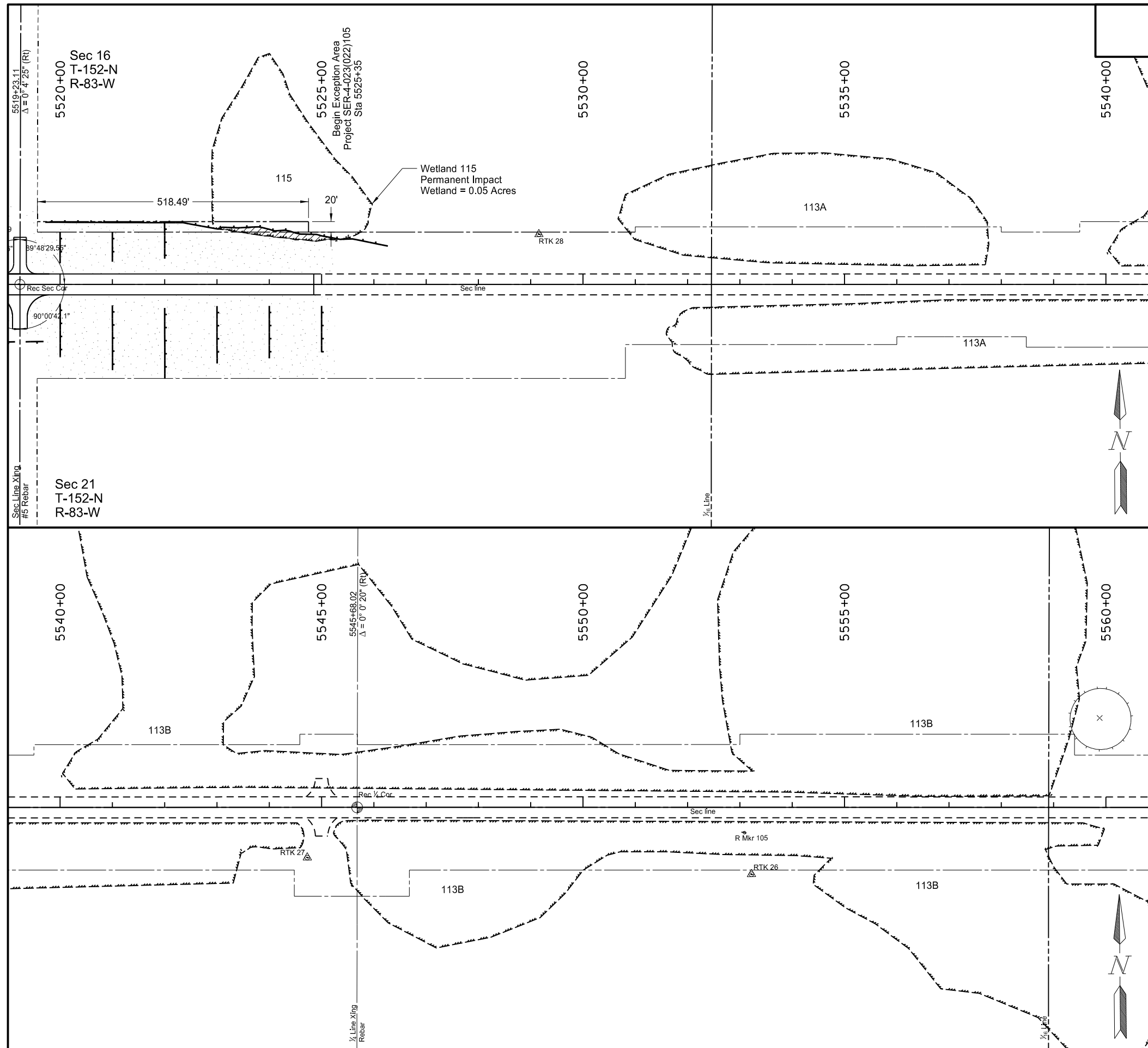
Item	Description	Quantity	Unit
708-1375	Flotation Silt Curtain Sta 5480+00 - Lt to 5516+00 Lt	999	LF
708-1430	Fiber Roll 12 In Sta 5480+00 - Lt to 5520+00 Lt Sta 5480+00 - Rt to 5520+00 Rt	1,954 1,998	LF LF
708-2240	Seeding - Type B CL II Sta 5480+00 - Lt to 5520+00 Lt Sta 5480+00 - Rt to 5520+00 Rt	8.13 8.23	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5480+00 - Lt to 5520+00 Lt Sta 5480+00 - Rt to 5520+00 Rt	8.13 8.23	Acre Acre
708-2280	Seeding - Type B CL IV Sta 5480+00 - Lt to 5520+00 Lt Sta 5480+00 - Rt to 5520+00 Rt	0.04 0.05	Acre Acre

- SEEDING-TYPE B CL II
SEEDING-TYPE B CL IV
MULCHING
- Permanent Wetland Impact
- Temporary Wetland Impact
- FIBER ROLLS 12IN
- FLOTATION SILT CURTAIN





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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	AC-SOI-NH-4-023(019)087	75	24



Item	Description	Quantity	Unit
708-1430	Fiber Roll 12 In Sta 5520+00 - Lt to 5526+50 Lt Sta 5520+00 - Rt to 5526+50 Rt	759 674	LF LF
708-2240	Seeding - Type B CL II Sta 5520+00 - Lt to 5525+50 Lt Sta 5520+00 - Rt to 5525+50 Rt	1.04 1.93	Acre Acre
708-2260	Seeding - Type B CL IV Sta 5520+00 - Lt to 5525+50 Lt Sta 5520+00 - Rt to 5525+50 Rt	1.04 1.93	Acre Acre

 SEEDING-TYPE B CL II
 SEEDING-TYPE B CL IV
 MULCHING
 FIBER ROLLS 12IN

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